

ALDE Compact 3020 .....	104
ALDE Compact 3020 Control Panel operating instructions .....	112
Dometic absorption refrigerators .....	123
Cooker 3 burner and hotplate .....	143
Microwave oven .....	148
Thetford C260 cassette toilet .....	151
Caravans with external BBQ point .....	158
Caravans with external shower point .....	159
Caravans with TV inlet in battery box .....	160
CD/MP3 tuner .....	161
Status directional TV and FM radio antenna .....	161
Bedding .....	162
Softrollo Blinds (Seitz) .....	163
Doorscreen .....	164
Exterior door key/operation .....	164
Windows .....	165
Roof lights .....	165
Mini Heki rooflight .....	166
Midi Heki rooflight .....	167
Heki-2 roof light (Bessacarr Cameo models) .....	168
Heki 4 remote control .....	168
MPK rooflight .....	170
Care/use of laminate tops, tables, furniture and doors .....	172
Shower care points .....	173
Fixing of awnings .....	173
Paint colour reference .....	173
Front locker and sunroof .....	173
Bonded Roof .....	173
Step on hitch cover .....	174
Cycle racks .....	174
Caravan motor mover .....	174
Omni-vent .....	175
Rear view camera .....	177
Service door operation .....	182

## ALDE HEATING OPERATING INSTRUCTIONS

The instructions covering fitted equipment to your caravan were correct at the time of going to print. Owners handbooks are updated annually and we take great care to try and ensure their accuracy. However, the Swift Group Limited cannot accept responsibility for any changes that may be made in specification or operating instructions to the equipment described in this section after the time of going to press.

Every care is taken to ensure that the information provided in this handbook is correct and easy to understand.

Separate manufacturers' leaflets on many of the components are also included in the Owner's Pack provided with this caravan and we recommend that you compare the instructions in the handbook with the component manufacturers literature, to ensure the information provided is as accurate as possible.

If you are in any doubt as to how to operate the equipment in your caravan, please contact the component manufacturer's service department on the telephone number shown on their component leaflet. If you remain in any doubt, please contact your supplying dealer.

**Notice:** In the interest of safety, replacement parts for an appliance shall conform to the appliance manufacturer's specifications and should be fitted by them or their authorised agents.

## Alde Compact 3020

**⚠ WARNING:** Alde can accept no liability whatsoever for damage or injury resulting from failure to observe these instructions.

### Specific Use

These instructions are approved for the Alde 3020 Compact HE boiler fitted in caravans, motorhomes or buildings in accordance with CE 0402 no. SC0653-13, and have the E5 mark for installation in vehicles in accordance with ECE R122, no. 00 001 and R10, no. 04 166, for use in central heating and hot water systems.

The boiler is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and/or knowledge, unless they have been given instruction or are supervised.

The term "specified use" also covers observance of the operating and installation instructions.

The Alde 3020 Compact HE boiler must be installed or repaired by a competent person in accordance with current local regulations.

In the unlikely event that your boiler develops a fault, switch off the boiler and contact Alde, or your dealer or installer.

Operating and installation instructions for the Alde control panel are supplied separately.

The owner is always responsible for maintenance and arranging inspection.

### Boiler Design

The boiler's internal heat exchanger consists of three concentric cylinders; the combustion chamber, the central heating cylinder and the hot water cylinder.

The combustion chamber is made from aluminium, and is divided into two halves by a baffle plate, with the burner head located in the top half, and the flue gases venting through the bottom half.

The combustion assembly is fixed to the end of the internal heat exchanger. It consists of

the burner, combustion fan, gas valve, air intake and exhaust ducts, and gas line.

Two electric heating elements are sealed inside the central heating cylinder, one for 1 kW, one for 2 kW.

### Gas Heating

When gas heating is set to on, the combustion fan starts to revolve. Once the correct speed is achieved (in rpm), a signal is sent to the PCB for the burner to be lit. The gas valve opens, passing gas, and the ignition module on the PCB generates sparks at the electrode on the burner head.

When the burner ignites, a flame supervision device signals the ignition module to cease sparking. The burner fires until the boiler or room thermostat reach the setpoint.

Should the burner flame cut out unexpectedly, the FSD detects this and attempts to reignite (for about 10 seconds), before shutting down and raising a fault code.

**Note:** Listen carefully to the ignition sequence of the boiler. You should hear the whirl of the combustion fan, the clunk of the gas valve and the tick-tick of the ignition module.

### Electric Heating

When electric heating is set to 1, 2 or 3 kW, relays on the PCB trip, feeding the 230 V supply to the electric heating elements. These are controlled by the same programme as the gas heating.

### Domestic Hot Water

The combi-type boiler automatically produces hot water. Heat is emitted from the central heating cylinder into the hot water cylinder. If the hot water cylinder is empty, the air is heated but no damage can result.

**Note:** In a good summer, for example, lower the desired temperature on the control panel to around 10 °C. The central heating will not circulate (unless the temperature drops to 10 °C), but you will still have hot water.

### WARNING:

- The boiler must not be switched on if there is no heat transfer fluid (HTF) in the system.
- Always drain down the freshwater system if there is risk of frost; in winter, for example. You may continue to use the boiler with no freshwater in the system, as required; no damage can result
- Always replace the HTF in accordance with the antifreeze product's lifespan. If in any doubt, replace the HTF after 2 years.
- Only sterilise the freshwater system with a product suitable for stainless steel.
- Do not place stowage in the boiler compartment.
- Do not position awnings, tents or other enclosures around the flue terminal.
- Do not obstruct the flue. Be careful not to flood the flue when washing the vehicle.
- The gas heating must not be used when refuelling the vehicle at the service station or related facility.

### Domestic Hot Water

Being a combi-type boiler, the Alde 3020 Compact HE has an integrated, stainless steel hot water cylinder that holds approximately 8.4 litres of freshwater.

The boiler can produce around 12 litres of 40°C warm water per 30 mins (at a cold water temperature of 10 °C). If only the electric heating is used, this capacity is slightly reduced.

The hot water should not be used for drinking or cooking.

Always flush out the hot water cylinder before use, especially when it has stood empty for some time. Any steriliser products should be suitable for use with stainless steel.

Avoid steriliser products containing sodium hyperchlorite, for example, as these will cause severe corrosion damage to the hot water cylinder. Read the product label or contact the product manufacturer for details.

# ALDE HEATING OPERATING INSTRUCTIONS

When the hot water cylinder is in continuous use, it should be drained and refilled once a month. This recreates the air cushion in the hot water cylinder that absorbs pressure surges.

**Tip!** If continuously using the hot water cylinder in a hard water area, fit an inline scale inhibitor to minimise the effects of limescale

Target hot water temperature is greater than 50 °C in normal operation, to prevent the growth of Legionella. Over 50 °C, the hot water will be heated to the maximum achievable temperature at the time. This allows the hot water to achieve disinfection temperatures, and increases warm water performance.

If scalding hot water temperatures are a concern – such as with the young, elderly or infirm – thermostatic mixing valves (TMVs) can be fitted, and may be required by local regulations.



**⚠ WARNING:** Always drain down and completely empty the hot water cylinder when there is risk of frost, unless the vehicle is explicitly stated to be self-winterising by the vehicle manufacturer.

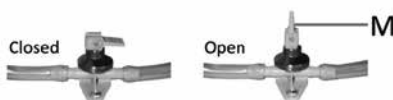
Failure to drain the hot water cylinder when there is a risk of frost may result in frost damage, and is not covered under warranty.

## Draining Freshwater

1. Switch off the water pump.
2. Open all water taps, showers, etc.
3. Open the safety/drain valve by lifting the yellow tab (Fig 1 [M]), or by turning the blue knob (Fig 1 [K]) 90°.
4. The system will drain directly below the vehicle through the clear plastic hose on the safety/drain valve. Check that all water has emptied out (7–10 litres). Leave the valve in the open position until the next time the hot water cylinder is used.

NB: Check that the red breather valve (Fig 1[N]) is allowing air to enter the hot water cylinder, when it is being drained, and that the clear plastic hose is not obstructed.

Open the manual safety/drain valve



Opening the safety/drain valve

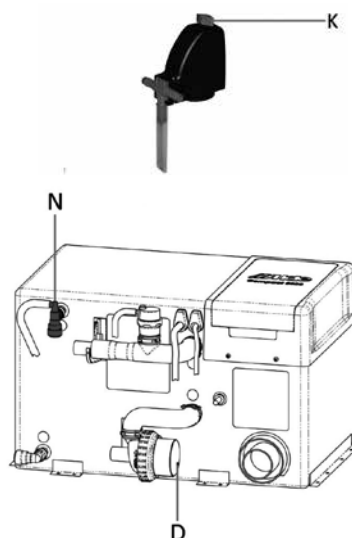


Figure 1

## Heat Transfer Fluid

The central heating system is filled with heat transfer fluid (HTF), a solution of 50% ethylene glycol antifreeze and 50% water.

The antifreeze manufacturer will have a maximum water hardness recommendation. Read the product label or contact the product manufacturer for details.

**Note:** Alde recommends antifreeze meeting VAG G12++ or G13 specification, and deionised water (0 ppm).

50:50 ethylene glycol antifreeze and water will protect against frost down to  $-35$ – $-37$  °C. A refractometer and/or hydrometer can be used to measure the strength of the antifreeze solution.

Corrosion protection will vary depending on the lifespan of the antifreeze. Read the product label or contact the product manufacturer for details.

**⚠ WARNING:** Always replace the HTF in accordance with the antifreeze product's lifespan. If in any doubt, replace the HTF after 2 years.

The corrosion inhibitors found in ethylene glycol antifreeze may not be cross-compatible. When topping up or replacing the HTF, ensure the new antifreeze is compatible with the current antifreeze product. Read the product label or contact the product manufacturer for details.

**⚠ WARNING:** As a rough guideline, blue and red antifreeze products are not compatible with each other, but VAG G12++ and G13 spec antifreeze (purple/magenta) is compatible with both.

Failure to fill with suitable HTF may result in severe damage to your Alde system, and is not covered under warranty.

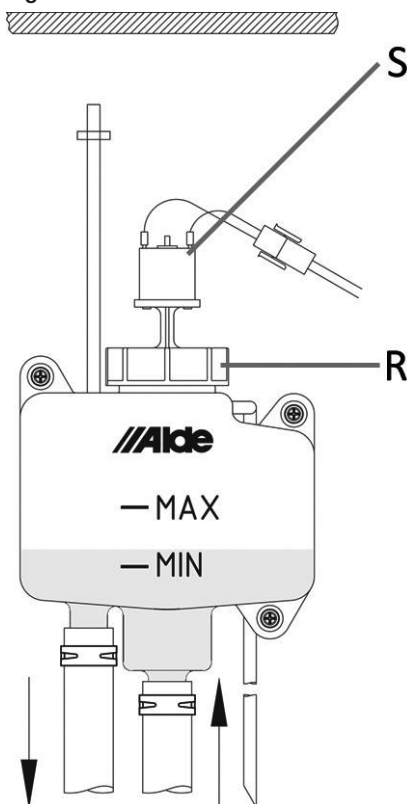
## Filling

The central heating system is filled with HTF through the expansion tank, either by hand, or using the Alde service pump. Any containers used for handling or storing the HTF should be checked first, and must be visibly clean to avoid introducing contaminants or foreign objects into the system.

Alde recommends using the Alde 1900-811 or 839 twin-motor service pump to fill the system.

To fill the system by hand, unscrew the expansion tank cap (Fig 2 [R]), and lift the circulation pump (Fig 2 [S]) out of the tank (if applicable). Carefully pour the HTF into the tank, and repeat until the fluid level is about 1 cm above the MIN mark when cold.

**Figure 2**



# ALDE HEATING OPERATING INSTRUCTIONS

## Draining

A drain is fitted in the central heating system, to allow draining of the HTF. Because the pipes step up and down, some HTF will be left in the system after draining. Contact an Alde certified agent to drain and refill your system.

## Central Heating

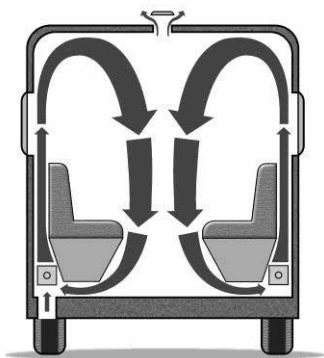
The boiler is set to an upper limit temperature of 85°C, i.e., the temperature of the heat transfer fluid (HTF) as it circulates around the pipes, radiators, convectors, et al.

To ensure the best performance from hydronic heating, air must be able to circulate freely around the back of the furniture (Fig 3). Air vents, cut into the top and bottom of the furniture must be unobstructed by carpets, cushions, or stowage, etc.

The full length of a convector should be ventilated for best performance.

**Note:** Use gas and electric heating simultaneously for the best performance. The boiler will only use as much energy as is needed, and is 93% efficient on a SEBDUK based test.

**Figure 3**



## Bleeding Air

The HTF will contain some air. This is unavoidable. Air bubbles can also be introduced when the system is filled.

In a newly-filled central heating system, you will need to bleed air from the bleed points to ensure best performance. There is an automatic air bleed valve on the boiler. There is also an air vent on the expansion tank.

Bleed points are installed at strategic points within the system to allow any trapped air to be bled off

**Note:** Contact the dealer or installer for details on where the bleed points are in your system, and how to access them.

To bleed the system, set the desired temperature to 30°C and select gas heating on the control panel.

Set the 12 V inline circulation pump on the side of the boiler to speed 5 (Fig 1 [D]), by turning the blue speed dial clockwise, on the face of the pump motor. NB: Speed is not adjustable if using the 12 V circulation pump fitted in the expansion tank.

After 10 mins, set the pump back to its normal running speed (2 for a caravan, 3 for a motorhome).

Now power off the Alde 3020 Compact HE boiler completely, making sure that the circulation pump is not active.

Follow the flow pipe from the boiler, and bleed the system at each bleed point.

If Alde bleed points have been fitted, these are metal bleed screws mounted on black EPDM rubber connectors (Fig 4). Have a cloth in hand. To open, turn the screw anticlockwise between thumb and forefinger. Air will hiss out. When fluid trickles out, close the bleed screw and mop up fluid with the cloth.



Move on to the next bleed point and repeat, until all bleed points have been tended to.

### Air Lock

If enough trapped air accumulates at one point, an air lock can result and prevent the circulation of hydronic heating.

A ramp or steep slope can be used to raise one end of the vehicle, causing the trapped air to shift around the system. Repeat the full bleed procedure. A caravan can be slowly and carefully tilted to reproduce this effect.

To clear a stubborn air lock in under 15 minutes, an Alde-certified service agent can use the Alde 1900-811 or 839 twin-motor service pump.

### 230 V ELECTRIC

The Alde 3020 Compact HE boiler has two 230 V electric heating elements, outputting 1050 W and 2100 W, or 3150 W combined, and drawing 5 A, 9 A, and 14 A respectively (rounded).

230 V breakers, fuses, fused spurs and isolator switches should be rated for 16 A.

Before using electric heating, check the current limit on the electric supply you are hooking up to.

- 6 A limit, only use 1 kW electric heating.
- 10 A limit, use 1–2 kW electric heating.
- 16 A limit, use 1–3 kW electric heating.

NB: If the electric supply has unstable voltage, the amperage will also fluctuate.

### LPG

LPG (liquefied petroleum gas) has two main variants, propane and butane gas. The gas heating in your Alde 3020 Compact boiler can use propane or butane gas as fuel. Many LPG fuels contain a mixture of propane, butane and other additives.

BS 5482 Part 1 states, “For butane cylinders, satisfactory service might not be obtained at temperatures of less than 10 °C; the most suitable temperature range is from 13 to 30 °C. For temperatures less than 13 °C, the use of propane should be considered.”

For this reason, Alde recommends using propane gas for all year round gas heating.

LPG cylinders contain both gas and liquid forms. When the cylinder is filled, high pressure transforms the gas into liquid. The liquid reverts to gas when the valve on the cylinder is opened.

LPG is a flammable gas. It can be a fire and explosion hazard if stored or used incorrectly. Store cylinders vertically and securely, to prevent them from toppling.

Do not mount your LPG cylinder horizontally or use liquid phase gas cylinders. Liquid–gas explosion may result. Read the product label or contact product manufacturer for details.

LPG is heavier than air. Should a gas leak occur the fitted floor vents allow the gas to escape from the caravan. For this reason always ensure that floor vents are unobstructed.

**⚠ WARNING:** The boiler compartment contains the gas connection, floor vents and the flue hoses. Do not place stowage in the boiler compartment.

In the event of a gas leak, or if you smell gas:

- Extinguish all naked flames
- Open all doors and windows
- Close all gas valves, including the valve on the cylinder.
- Do not smoke.
- Do not operate any electrical appliances or switches.
- Arrange for immediate inspection of the gas system by a competent person in accordance with current local regulations.

LPG from the cylinder is reduced in pressure by a regulator, and is supplied to the boiler at low pressure (30 mbar). Never use an unregulated high pressure supply.

Where oil and dirt in the gas supply are a concern, gas filters should be fitted to prevent blockage of the boiler gas valve.

## ALDE HEATING OPERATING INSTRUCTIONS

Gas heating must not be used whilst driving your vehicle unless a safety shut-off device is fitted to the gas system. Current local regulations must be adhered to.

### Flue

The burning of LPG produces CO<sub>2</sub> (carbon dioxide), a non-toxic, asphyxiant gas.

Exhaust flue gas can cause possible burns and poisoning. Avoid inhaling exhaust flue gas.


#### **WARNING:**

Do not position awnings, tents or other enclosures around the flue terminal.

Air supply is essential for clean combustion. The air intake is located in the flue terminal. For best performance, the flue terminal should be well vented. If leaving the gas heating unused for a period, ensure the flue terminal is covered to prevent pest animals nesting in the flue.

#### **WARNING:**

Do not obstruct the flue. Be careful not to flood the flue when washing the vehicle.

 **WARNING:** Air is sucked into the combustion chamber via the air intake. The gas heating must not be used when refuelling the vehicle at the service station or related facility.

### Maintenance

There is no manufacturer's service requirement for the Alde 3020 Compact boiler itself. Current local regulations must be adhered to. The installation of the boiler should be inspected annually for gas safety.


LPG hoses should be regularly checked for signs of damage and should be replaced, at maximum, after 5 years of use.

Bleed air from the system when newly filled, when the vehicle has been standing unused for a period, and before departing on holiday.

The fluid level in the expansion tank should be about 1 cm above the MIN mark when cool.

The heat transfer fluid (HTF) should be topped up if below this level, to prevent a break in circulation. Only top up with compatible HTF.

Never leave the system empty of HTF.

 **WARNING:** Always replace the HTF in accordance with the antifreeze product's lifespan. If in any doubt, replace the HTF after 2 years.

Failure to maintain the condition of HTF may result in frost and/or corrosion damage, and is not covered under warranty.


When the hot water cylinder is in continuous use, it should be drained and refilled once a month. This recreates the air cushion in the hot water cylinder that absorbs pressure surges.

### Winter

When camping in the winter, always ensure the flue terminal remains unobstructed by snow and ice. Extensions for roof flue terminals, and condensate spouts for side flue terminals are available from Alde.

Check the strength of the heat transfer fluid (HTF) with a hydrometer and/or refractometer. It should measure 50% ethylene glycol antifreeze, or -35–37 °C.

The central heating can still be used with no freshwater in the system. The air in the hot water cylinder is heated but no damage can result.

 **WARNING:** Always drain down and completely empty the hot water cylinder when there is risk of frost, unless the vehicle is explicitly stated to be self-winterising by the vehicle manufacturer.

If camping in temperatures below -10 °C, consider carrying spare parts in the event of an emergency. Alde recommends a 12 V circulation pump for the expansion tank (with cabling), a PCB, and 4–5 litres of ready to use antifreeze. These spare parts should be kept well insulated and in the warmest part of the vehicle; for example, in the wardrobe, near to the expansion tank pipes.



If storing the vehicle for winter, ensure the flue terminal is covered to prevent pest animals nesting in the flue.

If using the light duty 12 V circulation pump in the expansion tank, do not leave the central heating on over winter, even with a low desired temperature set.

**Note:** Air the vehicle over winter without wearing out the light duty pump. Use the programmable Alde control panel to automatically heat the vehicle for 24 hours, once a week.

### Trouble-Shooting

The Alde control panel will display any error messages. See the Operating and Installation Instructions supplied separately.

#### The system is completely dead, the control panel is blank

- Check the 20 mm T3.15 Amp glass fuse in the boiler. This is located under the lid of the black plastic service hatch, in a green plastic fuse holder.
- Check the 12 V supply to the boiler, it should be above 12 V.
- Check the 12 V cable is plugged into the boiler. Check the cable is plugged into the Alde control panel.

#### The boiler will not ignite on gas

- Check the gas cylinder is full. Try a different gas cylinder, ensuring it is propane gas.
- The system may not need to use gas heating, if also using electric heating.
- The fluids in the boiler may already be at operating temperature.

#### The boiler will not heat on 230 V electric

- Check that any 230 V isolator switches are on (they will often have an LED indicator).
- Check the 230 V supply to the vehicle.
- The fluids in the boiler may already be at operating temperature.

### No hot water

- Check that hot water ignore is not activated on the Alde control panel.
- Check that constant pumping is not activated on the Alde control panel.
- Check for other conflicting settings on the Alde control panel.
- Check the freshwater supply and water pump.

### No central heating

- Bleed the system of air.
- Check the fluid level in the expansion tank.
- Check that the circulation pump is responding.
- Check that hot water boost is not activated on the Alde control panel.
- Use gas and electric heating.
- Check that vents in the furniture are not obstructed.
- Check the condition of the heat transfer fluid.
- Most vehicles will reach a comfortable temperature within an hour, in non-extreme conditions.

If problems persist, please contact Alde, or your dealer or installer.

### WARRANTY

Alde undertakes to rectify any manufacturing defect or early component failure through normal use that occurs within 12 months of the installation date.

If your Alde boiler develops a fault, your first action should be to contact your dealer or installer, as they will be familiar with your installation and vehicle, and how to make a claim under warranty.

Alde International (UK) Ltd Huxley Close Park Farm South Wellingborough Northamptonshire NN8 6AB

Tel. 01933 677765 [www.alde.co.uk](http://www.alde.co.uk)

# ALDE HEATING OPERATING INSTRUCTIONS

## Alde 3020 - 113 Colour Touch Operating Instruction

The Alde 3020 Compact HE control panel has two hard buttons and a non-capacitive, colour touchscreen interface. The soft buttons displayed on the screen are operated by touching the screen with your finger.

**⚠ WARNING:** Please read the Alde 3020 Compact HE operating instructions fully before using the system.

### Starting the System



1. Both the control panel and boiler are off.
2. To start the system, press the Power button on the control panel. The Splash Screen is displayed and green LED is lit. The boiler will now start with the previously saved settings (factory settings by default).

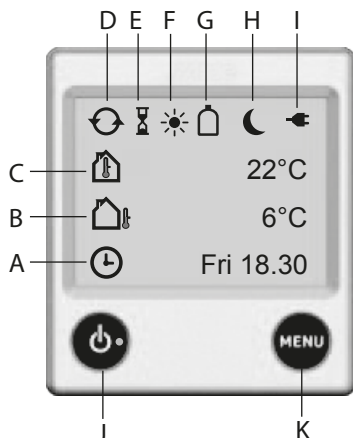
The system will now be drawing variable 0.1–1.5 A of current from the 12 V supply.

### Standby Screen

The Standby Screen is displayed after the Splash Screen. This screen contains useful information about the status of your heating system.

NB: If Standby Screen is set to “Dark” in Backlight settings, the Standby Screen will not be displayed, the screen will be dark unless touched.

- A. Clock is enabled. Day of the week and time shown.
- B. Outdoor temperature. [Optional outdoor temperature sensor required.]
- C. Room temperature. Measured at the control panel. [Optional discrete room temperature sensors available.]
- D. Central heating circulation pump is active.
- E. Delayed Start/Cycle is enabled.
- F. Day Mode active.
- G. Gas cylinder status. Full/empty and EisEx mode shown. [Additional accessories required.]
- H. Night Mode active.
- I. 230 V supply. If not displayed, the boiler is not receiving 230 V supply.
- J. Power button. Press to switch system on-off. Lit green LED indicates system is on.
- K. MENU button. Press to access Main Menu from Standby Screen or Settings Menu.

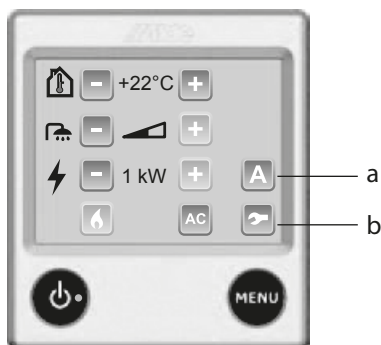


### Main Menu

Press MENU button to access the Main Menu from the Standby Screen or Settings Menu. The screen will revert to the Standby Screen after 30 secs if untouched.



1. Standby Screen. Press MENU button.
2. Main Menu.
- a. What's Activated Menu. [Not displayed if no activated functions are detected.]
- b. Settings Menu



### Desired Room Temperature

The desired room temperature can be set from 5 to 30 °C, in 0.5 increments.

**TIP:** The World Health Organisation recommends a room temperature of 18–24 °C for healthy living.

NB: If Day or Night Mode are active, the temperature cannot be adjusted, the Plus and Minus buttons will be greyed out.



1. The current desired room temperature is displayed.
2. Adjust by pressing Plus or Minus button.

### Domestic Hot Water

The Alde boiler stores 8.4 litres of hot water as standard. If the hot water cylinder is empty, the air is heated but no damage can result.

# ALDE HEATING OPERATING INSTRUCTIONS

**TIP:** In a good summer, for example, lower the desired temperature on the control panel to around 10 °C. The central heating will not circulate (unless the temperature drops to 10 °C), but you can still control hot water.

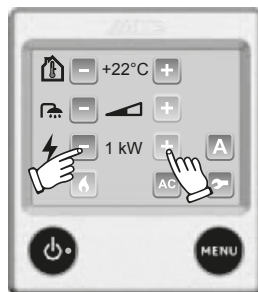
In a good summer, for example, lower the desired temperature on the control panel to around 10 °C. The central heating will not circulate (unless the temperature drops to 10 °C), but you can still control hot water.



1. Hot Water Ignore. Volume bar empty. No attempt is made to heat hot water specifically. This saves energy when the fresh water is drained down.
2. Hot Water Normal. Volume bar half-full. Hot water is heated to greater than 50 °C. NB: If Circulation Pump is set to Continuous, this option will not be available.
3. Hot Water Boost. Volume bar full. Central heating circulation is disabled for 30 mins. Hot water is heated to greater than 65 °C. After 30 mins the system reverts to Hot Water Normal.
4. Adjust by pressing Plus or Minus button.

## Electric Heating

Check that 230 V supply is displayed on the Standby Screen. The Alde boiler is hard-wired to use power economically and there are times when it may use no power at all, even if set to 3 kW.



1. Select Off, 1, 2 or 3 kW electric heating. More power equals better performance, but may be restricted by the current (amps) limit on the electric hook-up.

2. Adjust by pressing Plus or Minus button.

Maxcurrentdrawfrom230Vsupplyis4.5Aon1kW,9Aon2kW,14Aon3kW.Iftheelectricity supply has unstable voltage, the amperage will also fluctuate.

## Gas Heating

The Alde boiler is hard-wired to use power economically. The gas burner has two stages, shifting dynamically between low or full flame. There are times when it may use no power at all, even if gas heating is selected.

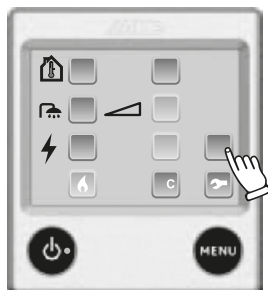


1. Press the Flame button to select gas heating. Green is on, blue is off.

Use both gas and electric heating for best performance.

### What's Activated Menu

Press the A button to access the What's Activated Menu. This screen shows any functions that are activated and allows direct access to that function by pressing its button. NB: The A button is not displayed if no functions are activated.



Please note: Not all functions are relevant to a caravan installation.

	Night Mode is enabled, but may or may not be active, depending on the time and day.
	Delayed Start/Cycle is enabled, but may or may not be active, depending on the time and day.
	Alde Smart-Control or daisy-chained, third party control panel is enabled. This feature must be engaged to use the Swift Command control panel or app for control of the heating system.
	Circulation Pump is set to Continuous. NB: This will reduce the hot water supply.
	Day Mode is enabled, but may or may not be active, depending on the time and day.
	Load Monitor is enabled and an amp limit is set.

### Settings Menu

Press the Tool Button to access the Settings Menu from the Main Menu. Lower level functions can be accessed by from these screens by pressing the buttons. NB: If a function is not available its button is greyed out.



# ALDE HEATING OPERATING INSTRUCTIONS



## Delayed Start/Cycle (requires Clock to be set)

Allows you to programme the boiler to start at a specified time and day, weekly. It will provide heating using the last saved settings for 24 hours, before automatically shutting down again. This is recommended for airing the vehicle over winter if stored locally and hooked up to 230 V power. Once Delayed Start/Cycle is enabled, the system should be shut down by pressing the Power button.



## Clock

The clock must be set for programmable functions to activate at the correct time/day. If 12 V power is lost, the clock will reset.

**TIP:** The optional Alde 3010-414 battery backup uses two AA batteries and allows the clock memory to be stored even if 12 V power is lost.



## Navigation Arrows

There are four screens in the Settings Menu. The up/down arrows allow you to navigate between them.



## Night Mode (requires Clock to be set)

Allows you to programme the boiler to automatically change and select settings at night. Set a start and stop time for the night-time period. Set a day of the week, or "All" for the same daily programme. You can also define:

- Desired room temperature
- Invert Standby Screen
- Hot water ignore
- Temperature sensor (if discrete room temperature sensors are connected)
- AC Quiet Mode (if Truma Aventa Comfort air-conditioning unit is connected)



## Day Mode (requires Clock to be set)

Allows you to programme the boiler to automatically change and select settings during the day. Set a start and stop time for the day-time period. Set a day of the week, or "All" for the same daily programme. You can also define:

- Desired room temperature
- Hot water ignore



## Temperature Offset

Recalibrate the room temperature displayed by the control panel in 0.5 °C increments. If an outdoor temperature sensor is connected, this can also be recalibrated.



## Return

Return to the previous menu.



## Prioritise

Select whether to prioritise gas heating or electric heating, when using both. Less demand will be placed on the non-prioritised fuel.

**TIP:** If you're hooked up to a site with a flat rate 230 V supply, but still want the extra performance from gas heating, prioritise electric heating to save money on gas.



## Button Sound

Bleep when a button is pressed.



## Backlight

The brightness of the Standby Screen can be adjusted from 1–3. The display mode of the Standby Screen can also be set.

**Dark.** The Standby Screen is deactivated, the control panel may appear dormant except for the power LED. Pressing the screen will activate the Standby Screen for 30 secs. Suited for use in dark/night-time conditions.

**Bright.** The Standby Screen shows dark characters on a light background. Suited for use in bright/day-time conditions.

**Invert.** The Standby Screen shows light characters on a dark background. Suited for low light conditions.



### Antimicrobial (requires Clock to be set)

Hot Water Boost will automatically activate at 02:00 every morning. This further reduces the risk of Legionella bacteria.



### Circulation Pump

Select which circulation pump to use for the central heating, depending on what pumps are installed.

(Your caravan is fitted with Pump Manual 12V)



**Pump Manual 12 V.** For the 12 V inline circulation pump with manual 5-speed dial.



**Pump Remote 12 V.** For the remote-controlled 12 V inline circulation pump. Pump speed can also be set. Speed 2 is recommended. Speed 4–5 should only be used prior to bleeding the system of air.



**Optional Pump 12 V.** For the optional 12 V circulation pump in the expansion tank.



**Pump 230 V.** For the 230 V inline circulation pump.

**Auto.** Automatically selects the 230 V pump when a 230 V supply is detected, or the optional 12 V pump when only 12 V supply is available.

Pump mode can also be set.

**Cont.** The pump is continuously active. This will reduce the hot water supply. For testing the circulation pump in the summer, if room temperature exceeds 30 °C.

**Thermo.** The pump is controlled by the room thermostat.



### External Switch

Allows you to use a third party, external switch to start up and shutdown the boiler. When the

external switch starts the boiler, it will provide heating using the last saved settings. Once External Switch is enabled, the system should be shut down by pressing the Power button. The external switch then takes control of the boiler.

**Ext.** When a circuit is made at X18 on the boiler, the boiler is started. When the circuit is broken, the boiler shuts down. For use with a third party rocker or toggle switch, or compatible telematics systems. NB: The Alde 3010-219 adaptor lead is available for connecting an external switch.

**230V.** When 230 V is detected, the boiler is started. When 230 V supply is lost, the boiler shuts down. No additional accessories required.

**Off.** External Switch is disabled.

**TIP:** Hiring out a vehicle? Your customers can operate the central heating/hot water with a convenient wall switch, whilst the control panel is fitted in a locked maintenance cupboard with a discrete room temperature sensor. On-off, no hassles.



### Language

Select English, French or German language. NB: The Service Menu is English language only.



### Load Monitor

If an Alde 3010-246 load monitor is installed, this allows you to set an amp limit from 5–17 A for the vehicle's

230 V power. If the current drawn by the vehicle exceeds the amp limit, the boiler will automatically reduce power.

This helps avoid tripping the circuit breakers on the electric hook up. The load monitor can be disabled by selecting "Off".

# ALDE HEATING OPERATING INSTRUCTIONS

## Settings Menu

Press the Tool Button to access the Settings Menu from the Main Menu. Lower level functions can be accessed by from these screens by pressing the buttons. NB: If a function is not available its button is greyed out.



## Error Log

Press the Warning button to access the Error Log from the Service Menu. The most recent 20 error messages are displayed. To verify an error message, remove the system from the 12 V and 230 V supply. Wait 10 secs before restoring 12 V and 230 V power to the system.



## Reset

Press Reset to restore factory default settings, and the Error Log will be cleared. NB: The Main Menu will be set to 22 °C, Hot Water Normal, 1 kW electric heating and gas heating.

**Note:** Using Reset to restore factory default settings does not clear Installed Accessories.



## Shutting down the system

To save energy, the control panel only updates the boiler after the last adjustment is made. Wait 10 secs before shutting down the system to ensure the boiler is updated.

1. Press the Power button again. The screen goes dark, the green LED is unlit. The system is off.

## Installed Accessories Menu

After fitting an accessory to the Alde 3020 Compact HE, it must be installed in the control panel software by ticking the box for that accessory in the Installed Accessories Menu, unless otherwise noted. Press the Installed Accessories button to access the menu from the Settings Menu.



The following options are shown as standard. Tick the box to install:

- Alde Smart Control, or third party control panel (connected to JP3 on Alde control panel). This includes the Swift Command system (E600) fitted to your caravan.
- Optional 12 V circulation pump in expansion tank (connected at X4 on boiler)
- Load Monitor (connected to X5 on boiler)
- 12 V inline circulation pump with manual 5-speed dial

## ALDE HEATING OPERATING INSTRUCTIONS

- Remote controlled 12 V inline circulation pump
- 230 V inline circulation pump

### Setup

How you set up your system will depend on what accessories are installed and your user preferences. To get you started, here's how to setup some of the more common features.

### Restore default factory settings

Before using the system for the first time, restore default factory settings. Your control panel may have been tested by the dealer or installer, and some settings may have been changed unintentionally.

1. Press Tool button to access the Settings Menu (bottom right in Main Menu).
2. Press down arrow, until Reset button is displayed.
3. Press the Reset button to proceed.

### Setup Standby Screen for bedtime

The backlight on the Standby Screen can be disturbing if the control panel is visible from your bed. It can be inverted for white text on black background.

1. Press Tool button to access the Settings Menu (bottom right in Main Menu).
2. Press down arrow, until Backlight button is displayed.
3. Press Backlight button, select Invert to proceed.

### Setup Antimicrobial function

To actively kill Legionella, setup the Antimicrobial function. At 2:00 every night, the hot water will be heated to over 65 °C for 30 mins. This further reduces the risk of Legionella.

1. Press Tool button to access the Settings Menu (bottom right in Main Menu).
2. Press Clock button, set the time and day. Press Return.
3. Press down arrow, until Antimicrobial button is displayed.
4. Press Antimicrobial button to proceed.

## Troubleshooting

Any error messages will be displayed on the Standby Screen. Error messages can be cleared by removing 12 V supply to the boiler for 10 secs.

### The system is completely dead, the control panel is blank

- Check the 20 mm T3.15 Amp glass fuse in the boiler. This is located under the lid of the black plastic service hatch, in a green plastic fuse holder.
- Check the 12 V supply to the boiler, it should be above 12 V.
- Check the 12 V cable is plugged into the boiler. Check the cable is plugged into the Alde control panel.

### The boiler will not ignite on gas, but no error message

- The system may not need to use gas heating if also using electric heating.
- The fluids in the boiler may already be at operating temperature.

### The boiler will not heat on 230 V electric

- Check the circuit breaker and any 230 V fuses.
- Check that any 230 V isolator switches are on (they will often have an LED indicator and 230V fuse).
- Check the 230 V supply to the vehicle.
- The fluids in the boiler may already be at operating temperature.

### No hot water

- Check that Hot Water Ignore is not activated on the Alde control panel.
- Check that Continuous pumping is not activated on the Alde control panel.
- Check for other conflicting settings on the Alde control panel.
- Check the fresh water supply and water pump.

## No central heating

- Bleed the system of air.
- Check the fluid level in the expansion tank.
- Check that the circulation pump is responding.
- Check that hot water boost is not activated on the Alde control panel.
- If electric heating is not being used, set it to "Off" on the Alde control panel.
- Use gas and electric heating for best performance.
- Check that vents in the furniture are not obstructed.
- Check the condition of the heat transfer fluid.
- Most vehicles will reach a comfortable temperature within 40 mins, in non-extreme conditions.

### Circulation pump active even though system is off

- 12 V supply to the boiler dropped to 7 V momentarily. Check 12 V supply for stability.

### "Panel failure 1" & "Panel failure 2"

- Moisture is trapped in the control panel.
- Remove the Alde control panel from the vehicle and air in a warm, dry place overnight.

### "Gas failure"

- Out of gas or gas is not igniting.
- Check the gas cylinder is full. Try a different gas cylinder, ensuring it is propane gas.
- Check the gas regulator and any isolation valves are open and not frozen.

### "Overheat red fail" or "Overheat blue fail"

- Bleed the system of air.
- Check the fluid level in the expansion tank. It should be 1 cm above Min mark when cool.
- Check the correct circulation pump is installed, selected and responding.
- 12 V supply to the boiler dropped to 7 V momentarily. Check 12 V supply for stability.
- Wait 15 mins for the fluid to cool down.

## ALDE HEATING OPERATING INSTRUCTIONS

### “Overheat PCB”

- Failsafe in boiler has triggered.
- Check the fluid level in the expansion tank. It should be 1 cm above the Min mark when cool.
- Check the boiler compartment is ventilated, and that the vents are unobstructed. Do not place storage in the boiler compartment.

### “Fan failure”

- Combustion fan speed too low. Bearing may be stiff after a period of disuse.
- Automatically clears after 5 mins. Please try again.

### “Connection failure”

- Loose connection between Alde control panel and boiler.
- Unplug cable at the control panel and boiler, then carefully plug back in.
- Check there is slack on the cable at the control panel, but not excessive weight from free-hanging/unmanaged cable.

### “Window open”

- Optional window sensor has triggered, gas heating is suspended. Automatically clears and gas heating resumes when window is closed.

### “3rd Party Panel C. Fail”

- Break in comms between Alde control panel and third party control panel.
- Check the cable between the Alde control panel and third party control panel.
- Third party control panel is installed in software but not fitted.
- Untick “Third Party Panel” in Installed Accessories Menu.

### “Low battery”

- 12 V supply to boiler has dropped below 10.5 V, possibly causing system brownout.
- Automatically clears when 12 V supply reaches 11 V.

### “No match Heater/Panel”

- Control panel is incompatible with boiler PCB.
- Check control panel part number. Control panel 3020-013 is for 3020 A-series boiler, 3020-113 is for 3020 HE-series boiler.

If problems persist, please contact Alde, or your dealer or installer.

For our frequently asked questions, or download all instruction manuals, please visit our web site at: [www.alde.co.uk](http://www.alde.co.uk)

## Dometic absorption refrigerator

Before you start using the refrigerator, please read the operating instructions carefully.

These instructions provide you with the necessary guidance for the proper use of your refrigerator. Observe in particular the safety instructions. Observation of the instructions and handling recommendations is important for dealing with the refrigerator safely and for protecting you from injury and the refrigerator from damage. You must understand what you have read before you carry out a task.

Keep these instructions in a safe place close to the refrigerator so they may be referred to at any time.

### Copyright protection

The information, texts and illustrations in these instructions are copyright protected and are subject to industrial property rights.

No part of these instructions may be reproduced, copied or utilised in any other way without written authorisation by Dometic GmbH, Siegen.

### Warranty

Warranty arrangements are in accordance with EC Directive 44/1999/CE and the normal conditions applicable for the country concerned.

For warranty or other maintenance, please contact our customer services department.

Any damage due to improper use is not covered by the warranty. The warranty does not cover any modifications to the appliance or the use of non-original Dometic parts. The warranty does not apply if the installation and operating instructions are not adhered to and no liability shall be entertained.

### Limitation of liability

All information and guidance in these operating instructions were prepared after taking into consideration the applicable standards and regulations as well as the current state of the art. Dometic reserves the right to make changes at any time which are deemed to be in the interest of improving the product and safety.

Dometic will assume no liability for damage in the case of :

- Non-observation of the operating instructions
- Application not in accordance with the regulations or provisions
- Use of non-original spare parts
- Modifications and interferences to the appliance
- Effect of environmental influences, such as
  - temperature fluctuations
  - humidity

### Customer services

Dometic offers a pan-European customer service network. Find your authorised customer service centre by calling the phone number indicated in the EuroService Network book, EuroService Network - which accompanies every refrigerator. You can also obtain the address information of the nearest customer service from [www.dometic.com](http://www.dometic.com). When contacting Dometic Customer Services, please state the model, product number and serial number together with the MLC code, if applicable. You will find this information on the rating plate inside the refrigerator. We recommend that you note this data in the field provided on the front page of the operation manual.

### Spare parts

Parts can be ordered throughout Europe from our customer services. Always give the model and product number when you contact the customer service! You will find this information on the rating plate inside the refrigerator.

### Environmental notice

Refrigerators manufactured by Dometic GmbH are free of CFC/HCFC and HFC. Ammonia (a

## DOMETIC REFRIGERATOR

natural compound of hydrogen and nitrogen) is used in the cooling unit as a coolant. Non-ozone-hazardous cyclopentane is used as a propellant for manufacturing PU foam insulation.

In order to ensure that the recyclable packaging materials are re-used, they should be sent to the customary local collection system.

The appliance should be transferred to a suitable waste disposal company that will ensure re-use of the recyclable components and proper disposal of the rest. For eco-friendly draining of the coolant from all absorber refrigeration units, a suitable disposal plant should be used.

### Energy-saving tips

- At an average ambient temperature of 25°C, it is sufficient to operate the refrigerator at middle thermostat setting.
- Where possible, always store precooled products.
- Do not expose the refrigerator to direct sunlight.
- Ensure that air circulation of the cooling unit is not obstructed.
- Defrosting at regular intervals saves energy (see "Defrosting"). Open the refrigerator door only for a short period of time when removing products.
- Run the refrigerator for about 12 hours before filling it.

## Safety instructions

### Application according to regulations

This refrigerator is designed for installation in recreation vehicles such as caravans or motorhomes. The appliance has been type approval tested for this application in accordance with the EC Gas Directive.

The refrigerator is to be used solely for storing foodstuffs.

**⚠ WARNING!** The refrigerator is not suitable for the proper storage of medication. Please observe the instructions in the medication package inserts.

### User's responsibility

Anyone operating the refrigerator must be familiar with the safe handling and understand the advice in these operating instructions. Children may only operate the appliance, if they have been made aware of how to operate the refrigerator safely and the dangers attending incorrect operation.

### Protection of children when disposing of the equipment

**⚠ WARNING:** When disposing of the refrigerator, detach all refrigerator doors and leave the storage racks in the refrigerator. In this way inadvertent entrapment and suffocation is prevented.

### Working upon and checking the refrigerator

**⚠ WARNING:** Work on gas equipment, exhaust system and electrical facilities must be carried out by authorised personnel only. Substantial damage to property and / or injury to persons can arise through unprofessional procedures.

**⚠ WARNING:** Never use an unshielded flame to check gas bearing parts and pipes for leakage! There is a danger of fire or explosion.

**⚠ WARNING:** Never open the absorber cooling unit! It is under high pressure. There is a danger of injury.

### Information on coolant

Ammonia is used as a coolant. This is a natural compound also used in household cleaning agents (1 litre of Salmiak cleaner contains up to 200g of ammonia - about twice as much as is used in the refrigerator). Sodium chromate is used for corrosion protection (1.8% by weight of the solvent).

In the event of leakage (easily identifiable from the strong odour), proceed as follows:

- Switch off the appliance.
- Air the room thoroughly.
- Inform authorised customer services.

**Note:** For your safety it was ascertained in an expert's report that no impairment of health exists when the coolant is discharged.

### Operating the refrigerator with gas

It is imperative that the operating pressure corresponds to the data specified on the rating plate of the appliance. Compare the operating pressure of the rating plate with the data specified on the pressure reducing valve of the liquid gas cylinder.

**⚠ WARNING:** Operating the appliance with gas is not permitted

- At petrol stations
- On ferry boats
- While transporting the caravan / motorhome by a transporter or breakdown vehicle.

There is danger of fire!

Leave the equipment switched off.

## Safety instructions when storing foodstuffs

### Instructions for storing food in a refrigerator:

No refrigerator of any kind can improve the quality of the food; refrigerators can only maintain the food's quality for a short duration as from the time of storing it.

Please observe the following particular conditions for storing food in a refrigerator that is built into a vehicle:

- A change in the climatic conditions such as temperature fluctuations
- High temperatures inside the vehicle when it is closed and parked in direct sunlight (temperatures are possible up to 50°C)
- Use of the refrigerator during travel with the power supply of 12V DC
- A refrigerator built in behind a window and exposed to direct sunlight
- Storing the products too soon, i.e. shortly after starting up the appliance for use

Under these particular conditions the refrigerator cannot guarantee reaching the temperature needed for perishables.

Perishables include all products with a stipulated use-by date and a minimum storage temperature of +4°C or less, especially for meat, poultry, fish, sausages, pre-packed foods.

- Pack raw and cooked foods separately (e.g. in containers, aluminium foil, etc.).
- Only remove the outside packaging of single packs if all the necessary information, e.g. the use-by date, can also be read on the single packs.
- Do not leave cooled goods outside the refrigerator for too long.
- Place the foods with the next use-by date at the front, accordingly.
- Pack away any left-over food and eat at the first opportunity.

# DOMETIC REFRIGERATOR


- Wash your hands before and after handling any food.
- Regularly clean the inside of the refrigerator.

Please observe the instructions and information regarding the use-by date on the outside packaging of the food.

Please observe section "Cleaning" of this instruction.

## Refrigerator rating plate

The rating plate is to be found on the inside of the refrigerator. It contains all important details of the refrigerator. You can read off from this the model identification, the product number and the serial number. You will need these details whenever you contact the customer service centre or when ordering spare parts.

			
TYPE	C 40/110	CLIMATE CLASS	SN
MOD. NO.	RMS 8400	PROD. NO.	00921084272
	1	2	3
BRUTTOINHALT TOTAL CAP. VOLUME BRUT	80 l 85 l	VERDAMPFERFACH FREEZER COMP VOLUME COMPT BT	8 01
		NUTZINHALT USEFUL CAP. VOLUME NET	77 l 82 l
~ 230-240V / 125 W ~ 12 V / 120 W	LPG	On: 0.252 kW (HR) th: 18.3 p/h	
4	5	13 + 28 - 30/37 138/P 28 - 30 13P 37	mbar
CE 0063 BL3214	G30, G31	p = 30/37	mbar
ABSORPTION	NH <sub>3</sub> = 115 g	Na <sub>2</sub> CrO <sub>4</sub> = 7.0 g	p max = 35 bar
CE 0063 021854	0063	021854	2.650
FKW, FCKW FREI / CFC, HCFC FREE	MADE IN GERMANY	00057364562	

### 1 - Model Number

### 2 - Product Number

### 3 - Serial Number

### 4 - Electrical rating details

### 5 - Gas pressure

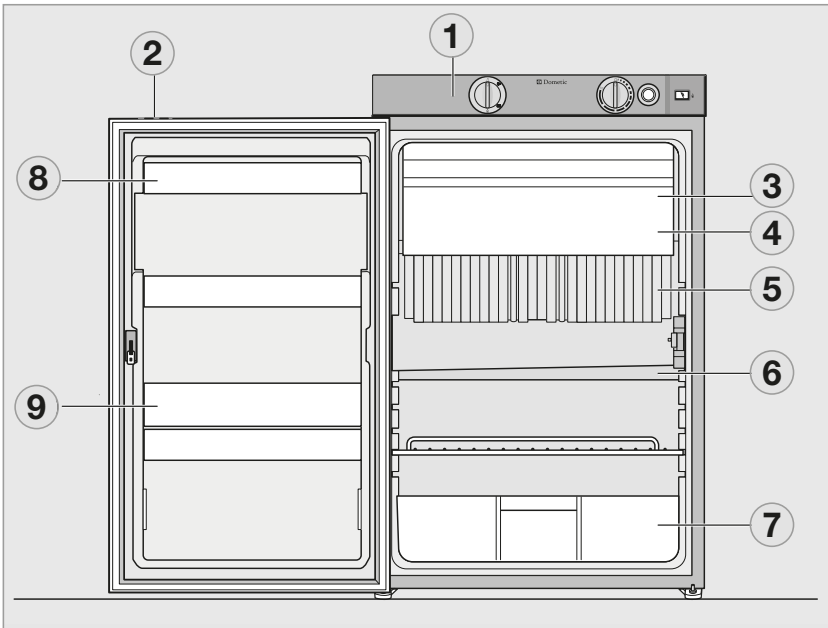
The cooling unit's performance is influenced by ambient temperatures. Please select the medium setting for ambient temperatures between +15°C and +25°C (refer to Setting of cooling compartment temperature.) The unit operates within its optimum performance range.

Dometic refrigerators work according to the absorption principle. For physical reasons,

an absorption system responds slowly to changes made by the thermostat controller, by loss of cooling energy through opening the door storing food. The devices meet the cooling performance requirements of the Climatic Clas SN acc. to EN/ISO 7371 in the temperature range of +10°C to +32°C ambient temperature.

For temperatures below +10°C, winter covers should be installed. For ambient temperatures exceeding +32°C for a longer period of time, it is recommended installing Dometic additional fan (item no. 241 2985 - 00).

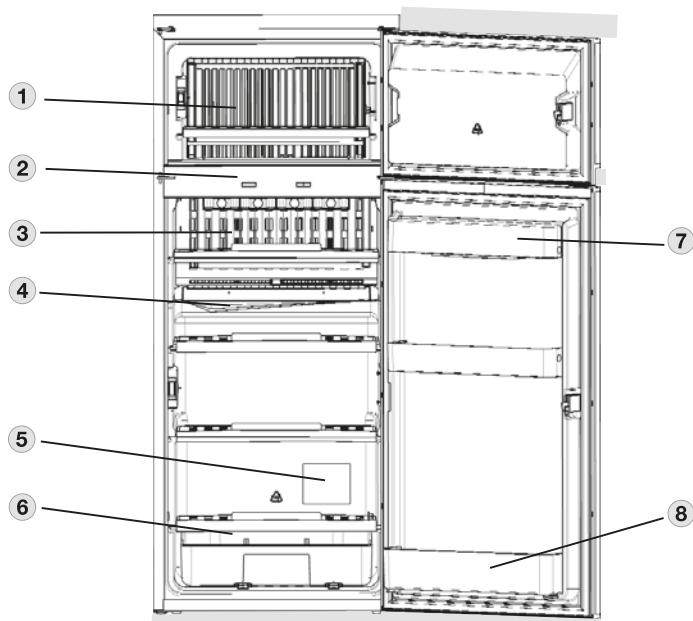


**Description of refrigerator**

(Appearance is model specific)

- 1 - Operating controls
- 2 - Door locking button
- 3 - Freezer compartment (removable)
- 4 - Insertable grid shelf (available as option, to be used when freezer compartment is removed)
- 5 - Post-evaporator for cooling compartment
- 6 - Condensation water drain channel
- 7 - Vegetable bin
- 8 - Upper door shelf with flap, egg shelf available as option may be inserted
- 9 - Lower door shelf with bottle holders

## DOMETIC REFRIGERATOR



- 1 - Freezer compartment
- 2 - Operating controls
- 3 - Post evaporator for cooling compartment
- 4 - Condensation water drain channel
- 5 - Data plate
- 6 - Vegetable bin
- 7 - Upper door shelf with flap, egg shelf available as option may be inserted.
- 8 - Lower door shelf with bottle holders

## Refrigerator operation

The refrigerator is equipped to operate on three power modes:

- Mains voltage (230V AC)
- Direct-current voltage (12V DC)
- Gas (liquid gas propane/butane)

Select the desired power mode by the energy selector switch (battery igniter type models) or the MODE button (MES, AES). Appliances with automatic energy selection (AES) are additionally provided with "automatic mode" function. The AES system automatically selects the best energy source for each particular situation.

### Cleaning

Before starting up the refrigerator, it is recommended that you clean it inside and repeat this at regular intervals.

Use a soft cloth and lukewarm water with a mild detergent. Then wipe out the appliance with clean water and dry thoroughly.

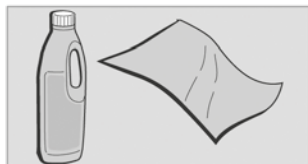


Fig. 1

To avoid material alterations, do not use soap or hard, abrasive or soda-based cleaning agents.

Do not allow the door seal to come into contact with oil or grease.

### Maintenance

- In compliance with the applicable regulations, please note that the gas unit and the connected ventilation ducts must be checked by authorised technical personnel after first use and after every other year for compliance with the European Standard EN 1949. A test certificate has to be issued. It is the user's responsibility to arrange this test.

- The gas burner must be inspected and cleaned as necessary at least once a year. When using liquefied petroleum gas (tank or refill cylinders) the maintenance interval is reduced to half-yearly or quarterly. Keep the evidence of maintenance work carried out on your refrigerator.
- Work on gas and electrical equipment shall be carried out by qualified personnel only.

It is recommended that this is carried out by an authorised customer services department.

We recommend maintenance following an extended shutdown of the vehicle. Please contact our customer services.

### Manual energy selection / automatic ignition (RMS 8551 RMD 8551, RML 9331) MES (fridge models)



Fig. 2

- 1 - Power ON/OFF switch
- 2 - Energy selector button 230V ~
- 3 - Energy selector button GAS
- 4 - Energy selector button 12V =
- 6 - Temperature level selection
- 7 - Temperature level display
- 8 - Indicator LED failure / Reset button GAS FAILURE

### Switching ON/OFF

- Switch ON by pressing button (1), 2s
- Switch OFF by pressing button (1), > 2s

### 230V AC operation

- Select "Mains voltage" by pressing button (2)
- Set temperature step by pressing button (6)

# DOMETIC REFRIGERATOR

## 12V DC operation (vehicle's battery)

- Select "Battery voltage" by pressing button (4)
- Set temperature step by pressing button (6)

## Gas operation

- Select "Gas" by pressing button (3)
- Set temperature step by pressing button (6)

## RMS 8551/RMD 8551/RM9xx1 MODELS MES appliances (manual energy selection)

### Electrical operation

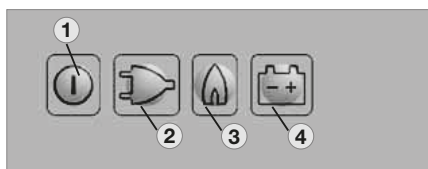



Fig. 3

To start the refrigerator, press button (1) for 2 seconds.

The refrigerator starts with the last selected type of energy.

230V operation :  Press button (2) :

12V operation :  Press button (4) :

### Gas operation

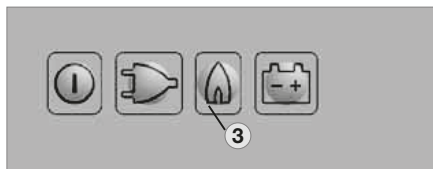


Fig. 4

Gas operation :

Press button (3) : 

The ignition process is activated automatically by means of an automatic igniter.

**Note:** The flame extinguishes after reaching the preset cooling compartment temperature and ignites again if the cooling compartment temperature increases again. If the flame is not lit after the first ignition attempt, the automatic igniter repeats the ignition twice (duration 30 s) at time intervals of 2 minutes. If the flame is not lit afterwards, a fault is indicated.

### Setting of cooling compartment temperature

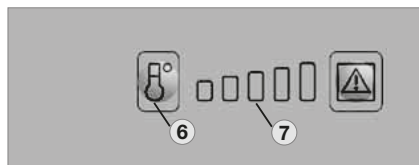


Fig. 5

Select the desired cooling compartment temperature by pressing button (6) .

The LED display (7) of the selected temperature setting is illuminated.

The scale starts with MIN position at the left LED position (small bar = highest temperature) and climbs up to MAX position at the right LED position (large bar = lowest temperature).

**Note:** The temperature levels do not relate to absolute temperature values.

### Additional features

- The brightness of the display reduces after a few seconds if no other buttons are pressed. The indicator lights again if a button is pressed. Press the button again to activate the required function.
- Failures are indicated by flashing of the failure indicator LED.
- Should the door be kept open for too long (more than 2 minutes), an acoustic signal is initiated (pulsing whistle tone).
- Should the electronic control detect any failure, an acoustic signal will sound (pulsing whistle tone). At the same time the display starts flashing (for trouble-shooting, please refer to page 140).

## Gas operation with internal batteries (optional)

An optional battery compartment in the electronics case for internal (self-contained) power supply of the electronics is available for the model variants RM 8xx1 and RM 8xx5 (appliances with electronics).



Fig. 6

Load the battery compartment with batteries (8 x AA 1.5 V) before operating the refrigerator.

All operating modes can be selected while the on-board 12 V DC power supply is active. The internal voltage is disconnected.

If the on-board 12 V DC power supply is not present or there is an interruption of the mains power supply during operation, the electronics automatically switch to the internal (battery) power supply. The refrigerator can now only be operated in the gas mode.

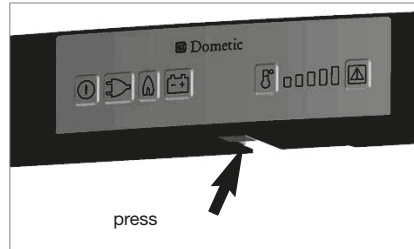
All LED indicators except the GAS LED are not lit during operation with internal batteries. The GAS LED flashes every 15 seconds.

If a button is pressed, the temperature level LEDs (7) also light.

If the battery voltage is too low, an acoustic signal (whistle tone) sounds every 15 seconds. Then replace the batteries in the battery compartment.

## Inserting / changing the batteries

- Switch off the refrigerator, as described in section 'Shutting of the refrigerator'



Opening battery compartment

Fig. 7

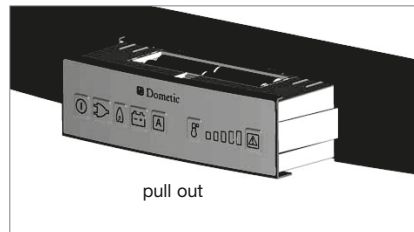


Fig. 8

**Note:** Batteries (8 x AA 1.5V) are not included!

### ⚠ WARNING:

- Observe the correct polarity!
- Do not connect non-rechargeable batteries to a charger.
- Remove rechargeable batteries from the battery compartment before charging.
- Avoid short circuits on the contacts in the battery compartment!
- Remove discharged batteries.
- Remove the batteries from the battery compartment if the refrigerator will not be used for a long time.
- Do not mix different types of batteries.

# DOMETIC REFRIGERATOR

## Explanation of operating controls

The control panel buttons are not accessible when the refrigerator door is closed. Open the bottom door to reach the operating buttons.

Depending on the door opening direction, there are two LEDs on the left or right edge of the control panel. The outer LED (1) indicates that the refrigerator is operational (blue). The other LED (2) lights red in the event of a fault.



Fig. 9

Refrigerators for self-contained (gas) operation contain two battery compartments in the control panel which are located on the left and right next to the button bar.



Fig. 10



Fig. 11

## Manual energy selection / automatic ignition (RMD 8xx1) MES



Fig. 12

- 1 - Power ON/OFF switch
- 2 - Energy selector button 230V ~
- 3 - Energy selector button GAS
- 4 - Energy selector button 12V =
- 6 - Frameheating
- 7 - Temperature level selection

8 - Temperature level display

9 - Indicator LED failure / Reset button  
GAS FAILURE

## Switching ON/OFF

- Switch ON by pressing button (1), 2s
- Switch OFF by pressing button (1), > 2s

## 230V AC operation

- Select "Mains voltage" by pressing button (2)
- Set temperature step by pressing button (7)

## 12V DC operation (vehicle's battery)

- Select "Battery voltage" by pressing button (4)
- Set temperature step by pressing button (7)

## Gas operation

- Select "Gas" by pressing button (3)
- Set temperature step by pressing button (7)

## RMS 8551/RMD 8551/ RM9xx1 models MES-appliances (manual energy selection)

## Electrical operation

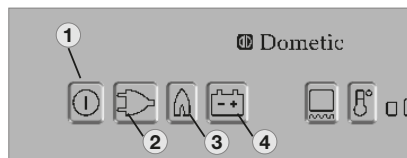



Fig. 13

To start the refrigerator, press button (1) for 2 seconds.

The refrigerator starts with the last selected type of energy.

230V operation :   
Press button (2) :

12V operation :   
Press button (4) :

## Gas operation

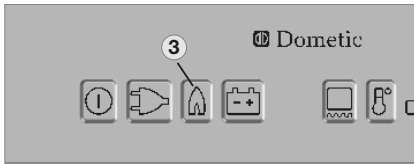


Fig. 14

Gas operation :

Press button (3) :

The ignition process is activated automatically by means of an automatic igniter.

**Note:** The flame extinguishes after reaching the preset cooling compartment temperature and ignites again if the cooling compartment temperature increases again. If the flame is not lit after the first ignition attempt, the automatic igniter repeats the ignition twice (duration 30 s) at time intervals of 2 minutes. If the flame is not lit afterwards, a fault is indicated.

## Setting of cooling compartment temperature

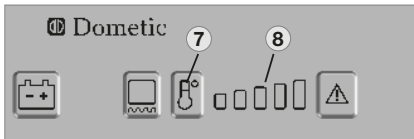


Fig. 15

Select the desired cooling compartment temperature by pressing button (7) .

The LED display (8) of the selected temperaturesetting is illuminated.

The scale starts with MIN position at the left LED position (small bar = highest temperature) and climbs up to MAX position at the right LED position (large bar = lowest temperature).

**Note:** The temperature levels do not relate to absolute temperature values.

## Additional features

- The brightness of the display reduces after a few seconds if no other buttons are pressed. The indicator lights again if a button is pressed. Press the button again to activate the required function.
- Failures are indicated by flashing of the failure indicator LED.
- Should the door be kept open for too long (more than 2 minutes), an acoustic signal is initiated (pulsing whistle tone).
- Should the electronic control detect any failure, an acoustic signal will sound (pulsing whistle tone). At the same time the display starts flashing (for trouble-shooting, please refer to page 140).

## Gas operation with internal batteries (optional)

An optional battery compartment in the electronics case for internal (self-contained) power supply of the electronics is available for the model variants RMD 85x1 and RMD 85x5 (appliances with electronics).

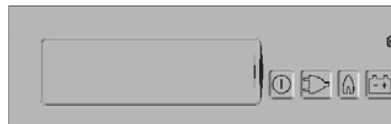


Fig. 16

Load the battery compartment with batteries (8 x AA 1.5 V) before operating the refrigerator.

All operating modes can be selected while the on-board 12 V DC power supply is active. The internal voltage is disconnected.

If the on-board 12 V DC power supply is not present or there is an interruption of the mains power supply during operation, the electronics automatically switch to the internal (battery) power supply. The refrigerator can now only be operated in the gas mode.

All LED indicators except the GAS LED are not lit during operation with internal batteries. The GAS LED flashes every 15 seconds.

If a button is pressed, the temperature level LEDs (7) also light.

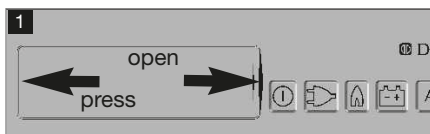
# DOMETIC REFRIGERATOR

If the battery voltage is too low, an acoustic signal (whistle tone) sounds every 15 seconds.

Then replace the batteries in the battery compartment.

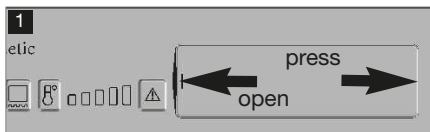
## Inserting / changing the batteries

Switch off the refrigerator, as described on page 139 Shutting off the refrigerator.



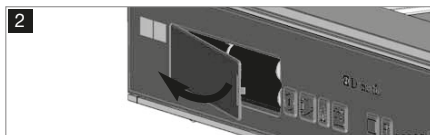
Opening left battery compartment

Fig. 17



Opening right battery compartment

Fig. 18



**Note:** Batteries (8 x AA 1.5V) are not included!

### ⚠ WARNING:

- Observe the correct polarity!
- Do not connect non-rechargeable batteries to a charger.
- Remove rechargeable batteries from the battery compartment before charging.
- Avoid short circuits on the contacts in the battery compartment!
- Remove discharged batteries.
- Remove the batteries from the battery compartment if the refrigerator will not be used for a long time.
- Do not mix different types of batteries.

## Frame heating (fridge freezer models only)

All fridge freezer models are equipped with a frame heating (12VDC/3,5W) around the freezer compartment. During summer months with high temperatures and humidity the metal frame may have water droplets forming. To evaporate these droplets switch on the frame heating with button (6).

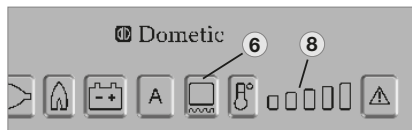


Fig. 19

The operating time of the frame heater can be set to 2 hours, 5 hours or continuous operation. After selecting the operating time using the button (6), the temperature level indicator (8) is extinguished for a short time to show the set operating time for a few seconds. The display then returns to the temperature level indicator.

### Operating time: 2 hours

Press button (6) once

Display



### Operating time: 5 hours

Press button (6) twice

Display



### Permanent operation

Press button (6) three times

Display





**⚠ WARNING:** In order to prevent discharge of the onboard battery, change the frame heater from continuous operation to another operating time or switch it off.

**Note:** The frame heater is active for 30 minutes after switching on and then switches itself off and on again at time intervals of 5 minutes.

## Door locking

**⚠ WARNING:** As a basic rule, shut and lock the refrigerator before you start your journey!

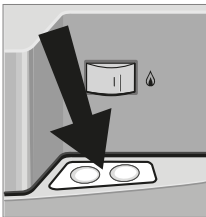


Fig. 20

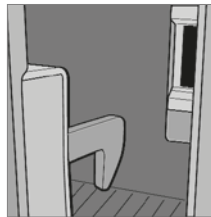


Fig. 21

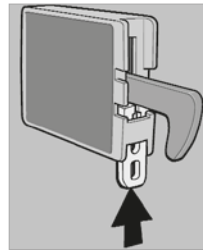
Open the door by pressing the locking button and pull open (see Fig. 20).

Shut the door again by pushing it to close. The snapping into the lock can be heard.

While the vehicle is parked, the locking hook may be fixed to facilitate opening of the door (Fig. 22-25).

### Fastening and releasing the door lock hook when parking the vehicle

If the vehicle is parked for a longer period of time, the locking hook may be clamped by means of a lockbar. The door may now be opened by just pulling it without need of pressing the locking button.



Fastening

Fig. 22

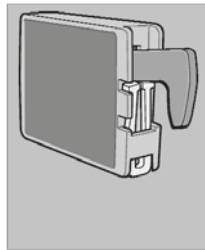
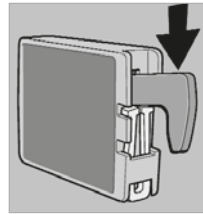


Fig. 23



Releasing

Fig. 24

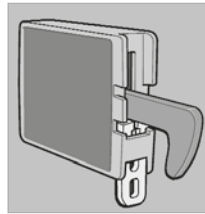


Fig. 25

## Lighting

The interior lighting is controlled using a door contact. Should the door be kept open more than 2 minutes, an acoustic signal is initiated (pulsing whistle tone). **(except for models with battery igniter).**

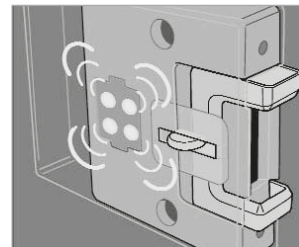


Fig. 26

**Note:** Please contact the authorized Dometic Service if a failure occurs.

## DOMETIC REFRIGERATOR

### Positioning the storage racks

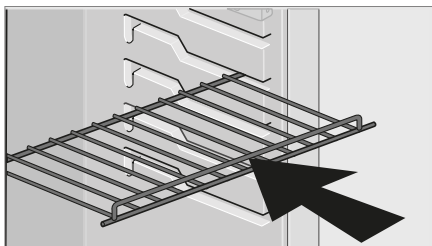


Fig. 27

The storage racks may be pulled out by smoothly lifting them and may be positioned as desired.

### Removable freezer compartment

#### RMS 8551 under counter fridge

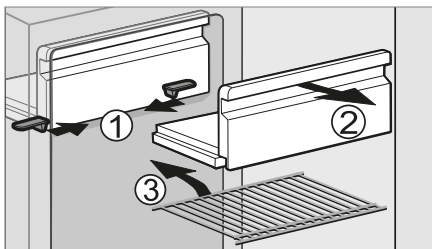


Fig. 28

To enlarge the cooling compartment, just remove the freezer compartment.

1. Unlock the freezer compartment on both sides.
2. Pull the freezer compartment out. Store the freezer compartment safely in order to prevent damage

**Note:** Once the freezer compartment is removed, an additional storage rack (3.) may be installed. The storage rack is a piece of extra equipment and may be obtained by Dometic.

### Winter operation

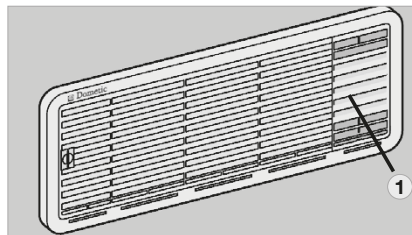


Fig. 29

In winter, check that the ventilation grilles and the exhaust duct system (1) have not been blocked by snow, leaves, etc.

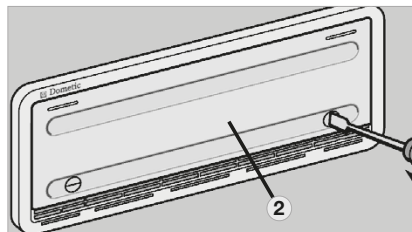


Fig. 30

When the outside temperature falls below +10°C, the winter covers should be fitted. This protects the unit from excessively cold air which could have adverse effects on the performance of the unit.

Covers may be supplied as part of the specification of your caravan or alternatively are available through most Swift Group Dealers.

**Note:** You should also attach the winter covers if the vehicle is taken out of service for a longer period of time or while it is being cleaned from the outside.

### Winter operation (fridge freezer models)

In winter, check that the ventilation grilles and the exhaust duct system (1) have not been blocked by snow, leaves, etc.

**Note:** Winter covers are not supplied as standard on most models.

## DOMETIC REFRIGERATOR

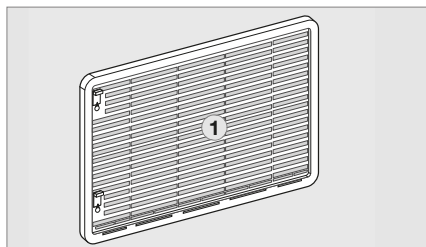


Fig. 31

When the outside temperature falls below  $+10^{\circ}\text{C}$ , the winter cover (2) should be fitted. This protects the unit from excessively cold air which could have adverse effects on the performance of the unit.

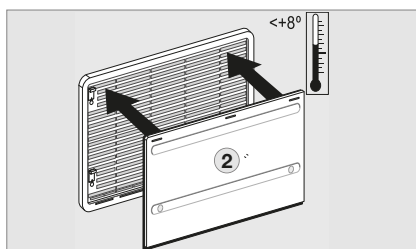


Fig. 32

You should also attach the winter covers if the vehicle is taken out of service for a longer period of time or while it is being cleaned from the outside.

## Storing food and making ice cubes

### Storing products in the cooling compartment

- Switch the refrigerator on approx. 12 hours before filling it.
- Always store pre-cooled foods in the refrigerator. Make sure that the food is well cooled when it is bought and also when transporting it. Use insulated cooling bags.
- Open the refrigerator door only for a short period of time when removing products.

- Products must be packed - best of all in closed containers, wrapped in aluminium foil or similar - and stored separately from each other, in order to prevent drying out or odours.
- Allow foods that have been warmed up to cool down before storing.
- Avoid storing products in the refrigerator that could emit volatile flammable gases.
- Do not overfill the storage grids and compartments to prevent obstructing the internal air circulation.
- Maintain a clearance of approx. 5 - 10 mm between chilled products and post-evaporator ("cooling fins").
- Do not expose the refrigerator to direct sunlight. Please bear in mind that the temperature inside a closed vehicle increases sharply if exposed to sunlight and that this can reduce the efficiency of the refrigerator.
- Ensure that air circulation of the cooling unit is not obstructed. Keep the ventilation grilles free from obstructions.

### Storing products in the freezer compartment

- Do not keep carbonated drinks in the freezer.
- The freezer compartment is suitable for making ice cubes and for short-term storage of frozen food. It is not suitable as a means of freezing foods.

**When ambient temperatures are lower than  $+10^{\circ}\text{C}$  and the refrigerator is exposed to these temperatures for extended periods of time, an even regulation of freezer temperature cannot be guaranteed for system related reasons. This can cause the temperature in the freezer to rise and the stored goods to melt.**

# DOMETIC REFRIGERATOR

## Refrigerator compartments

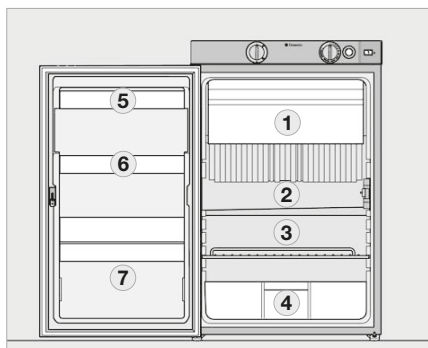


Fig. 33

- 1 - Freezer compartment:**  
already frozen food (deep-frozen food)
- 2 - Middle compartment:**  
Dairy products, convenience food
- 3 - Bottom compartment:**  
Meat, fish, food for defrosting
- 4 - Vegetable compartment:**  
Salads, vegetables, fruit
- 5 - Top door shelf:**  
Eggs, butter
- 6 - Middle door shelf:**  
Cans, dressings, ketchup, jam
- 7 - Bottom door shelf (drinks compartment):**  
Drinks in bottles or bags

## Positioning the storage racks

The storage racks may be pulled out by loosening the two locking devices (1) underneath. For loosening pull the slider to the middle, for fastening pull them sideways.

Two of the storage racks are secured. In this way inadvertent entrapment and suffocation of children is prevented, if the storage racks are removed. To protect children it must be avoided to create space for children in the cooling compartment.

**⚠ WARNING:** Do not remove these storage racks. Thus children have no space to be entrapped in the refrigerator.

If it is necessary to remove these storage racks (i.e. for cleaning) loosen the locking pins (2) at first as shown, by means of a suitable screw driver.

Put in place the locking pins after removing the storage racks.

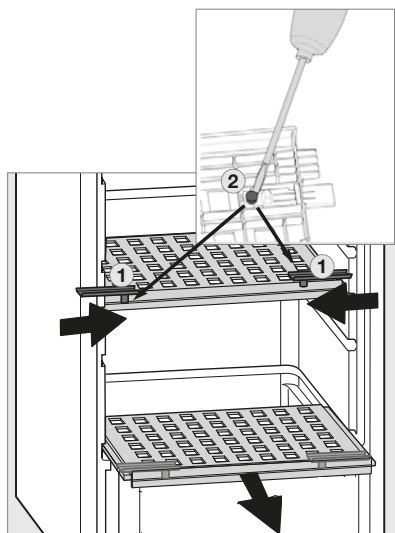


Fig. 34

### Shutting off the refrigerator

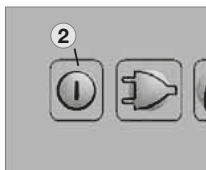


Fig. 35

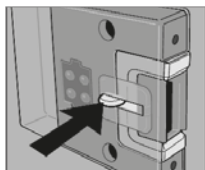


Fig. 36

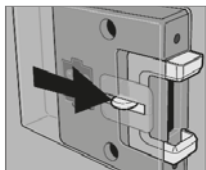


Fig. 37

- Switch off MES and AES models by pressing button (2). Keep button (2) pressed for 3 seconds. The display disappears and the appliance is fully switched off (Fig. 35).
- Release the locking mechanism of the door lock by pushing it and shift it to the front. If the door is shut in this position, a small gap is nevertheless kept open to prevent formation of mildew.
- If the refrigerator is to be taken out of service for an extended period of time, close the onboard shut-off valve and the cylinder valve.

## DOMETIC REFRIGERATOR

**Troubleshooting**

**Failure: The refrigerator does not cool sufficiently.**

Possible cause	Action you can take
Inadequate ventilation to the unit	Check that the ventilation grilles are not covered
Thermostat setting is too low	Set thermostat to a higher level
The condenser is heavily frosted	Check that the refrigerator door closes properly
Too much warm food has been stores inside within a short period of time	Allow warm food to cool down before storage
The appliance has been running for only a short period of time	Check whether the cooling compartment works after approx 4-5 hours
Ambient temperatures too high	Regularly remove ventilation grilles.

**Failure: The refrigerator does not cool in gas operation mode.**

Possible cause	Action you can take
Gas cylinder empty	Change gas cylinder
Is the upstream shut-off device open?	Open shut-off device
Air in the gas pipe?	Switch off the appliance and start again. Repeat this procedure 3-4 times, if necessary.

**Failure: The refrigerator does not cool in 12 V operation.**

Possible cause	Action you can take
On-board fuse defective	Fit new fuse
On-board battery displaced	Check battery, charge it
Engine not running	Start engine
Heating element defective (please refer to failure indication)	Please inform the Dometic Customer Services.

### Failure: The refrigerator does not cool in 230 V operation.

Possible cause	Action you can take
On-board fuse defective	Fit new fuse
Vehicle not connected to mains supply voltage	Make a connection to a mains power supply
AES: Gas operation despite connection to the mains supply voltage?	Appliance switches to gas operation due to insufficient mains supply voltage (automatically switches back to 230 V operation)
Heating element defective (please refer to failure indication)	Please inform Dometic Customer Services

### Information on failure display and trouble-shooting

- Refrigerators with an electronics system (MES, AES) indicate the occurrence of a malfunction by the LED or display flashing.
- If a malfunction occurs, the indicator LED "Failure" (8) flashes simultaneously. In the case of AES models an acoustic alarm sounds.

Before notifying the authorised Service Center, please check whether:

- the instructions in section "Operating the refrigerator" have been observed.
- the refrigerator stands level.
- it is possible to operate the refrigerator with any available power source.

### Status indicators



MES

Fig. 38

- 1 - Button ON / OFF
- 2 - Energy selector switch 230 V AC
- 3 - Energy selector switch GAS
- 4 - Energy selector switch 12V DC
- 6 - temperature level button
- 7 - temperature level display
- 8 - fault LED / GAS FAULT reset button

# DOMETIC REFRIGERATOR

## Operation with on-board 12 v power supply

Indicator	Fault	Remedy
<b>(2) and (8)</b> flashing and acoustic signal 20s	<b>230 V mode:</b> "230V" not available or voltage too low	Check mains power connection, mains voltage, fuse
<b>(4) and (8)</b> flashing and acoustic signal 20s	<b>12 V mode:</b> "12V" not available or voltage too low	Check 12V connection, on-board battery, fuse
<b>(3) and (8)</b> flashing and acoustic signal 20s	<b>Gas mode:</b> Flame not ignited	Check gas supply (gas bottle, gas valve) Press the <b>(8)</b> button after clearing the fault
Acoustic signal, 15s at two minute intervals	Interior lighting is switched on	Close door, check door contact
<b>(2) and (7)</b> flashing and acoustic signal 20s	<b>230 V mode:</b> 230V heating element defective	Arrange replacement of 230V heating element, contact Customer Service
<b>(4) and (7)</b> flashing and acoustic signal 20s	<b>12 V mode:</b> 12V heating element defective	Arrange replacement of 12V heating element, contact Customer Service
<b>(7)</b> flashing and acoustic signal 20s	Temperature sensor without contact or defective	Contact Customer Service
<b>(3) and (7)</b> flashing and acoustic signal 20s	Burner defective or cooling unit defective	Check burner, burner nozzles, if necessary contact Customer Service and arrange replacement



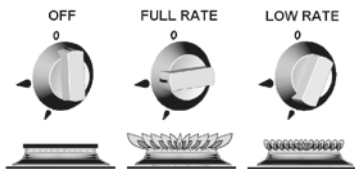
### Operation with batteries (internal power supply)

Indicator	Fault	Remedy
<b>(3) and (8)</b> flashing brightly	Flame not ignited	Check gas supply (gas bottle, gas valve) Press the <b>(8)</b> button after clearing the fault
<b>(3) and (7)</b> flashing brightly	Burner defective or cooling unit defective	Check burner, burner nozzles, if necessary contact Customer Service and arrange replacement
Acoustic signal at 15 second intervals	Undervoltage detection (internal batteries)	Replace batteries
Automatic switching from external to internal power supply does not function (absence of the onboard 12V power supply for the electronics)	Refrigerator does not function, gas operation not possible although the batteries are inserted	Switch off the refrigerator and start again  The onboard power supply was interrupted during the starting of the gas operation  <b>Note:</b> No automatic switching is performed during the ignition.

## Cooker Operation

### Cooker 3 Burner + Hotplate operation

#### Burner operation



**Fig. 1**

#### Important

- Although each burner will support pans from 10 to 22cm, care should be taken not to overload the appliance as performance may be reduced.
- The following pan sizes are the maximum we recommend:- Electric Hotplate:- Ø18cm  
Auxiliary Burner:- Ø20cm Semi-Rapid  
Burner:- 2x Ø20cm or 1x Ø22cm with  
1x Ø18cm

- When using small pans the flames should not spread beyond the base of the pan as this will reduce the efficiency of the burner.
- Avoid old or misshapen pans as these may cause instability.
- The lid must be opened fully prior to using the hotplate burners.

#### Using the Hotplate Gas Burners

- Ensure gas cylinder/supply is connected and turned on. In the event of a gas smell turn off at gas cylinder/mains and contact supplier.
- Flame supervision: Each burner is controlled individually and is monitored by a thermocouple probe. In the event of the burner flames being accidentally extinguished, turn off the burner control and do not attempt to re-ignite the burner for at least one minute.

## COOKER

3. To light: Push in the control knob and turn to full rate – see Fig.1. Hold a lighted match or taper to the burner and push the control knob in and hold. It is necessary to hold the knob depressed after the burner has ignited for approximately 10 - 15 seconds, to allow the thermocouple probe to reach temperature, before releasing the knob. Should the flame go out when the knob is released, the procedure should be repeated holding the knob depressed for slightly longer.
4. For models fitted with Spark Ignition the procedure is similar except that the burner can be ignited by depressing the ignition button, which is located on the fascia. If the burner has not lit within 15 seconds the control knob should be released and the burner left for at least 1 minute before a further attempt to ignite the burner.
5. For simmering, turn the knob further anti-clockwise to the low rate position.
6. To turn off: Turn the control knob until the line on the control knob is aligned with the dot on the control panel. Always make sure the control knob is in the off position when you have finished using the hotplate burners.

### Operation

#### Using the Electric Hotplate

Ensure the electricity is switched on.

The hotplate control is numbered from 1 to 6. To turn it on, rotate the knob either clockwise or anti-clockwise to the required position. Position 1 is the coolest setting.

To turn the hotplate off, rotate the knob until the line or pointer on the knob lines up with the zero on the control panel.

The hotplate is a sealed construction and transfers heat through conduction. For maximum efficiency a correctly sized pan with a flat heavy gauge base should be used. Pan size should be the same or slightly larger (up to 1" / 2.5cm oversize).

Before using your hotplate for the first time, we recommend that you prime and then season it.

#### To prime the Hotplate

Switch on the hotplate for a short period, without a pan, to harden and burn off the coating.

Use a medium to high setting for 3 – 5 minutes. A non toxic smoke may occur during this process. Allow it to cool, then season.

#### To season the Hotplate


First heat the hotplate for 30 seconds on a medium setting, then switch off. Pour a minimal amount of unsalted vegetable oil onto a clean dry cloth or paper towel, and apply a thin coat of oil to the hotplate surface. Wipe off any excess oil, then heat the hotplate on a medium setting for 1 minute. Occasional seasoning will help to maintain the Hotplate's appearance.

#### WARNING:

- Glass lids may shatter when heated. Turn off the hotplate and allow it to cool before closing the glass lid.
- Remove all spillage from the surface of the glass lid before opening.
- The glass lid has the tendency to snap shut towards the end of lowering.

This is caused by the travel lock action of the hinges as it is activated.

Make sure all fingers are removed from appliance when closing the lid.

 **WARNING:** The use of the electric hotplate and gas hobs will generate heat. We recommend, to avoid excess build-up of heat around the cooker area, the window is left opened when cooking to allow for additional ventilation.

## Important

- Your appliance is fitted with a glass lid shut-off system, which cuts off the power to all hotplate burners (gas and electric) if the lid is closed.
- Ensure the glass lid is in the open and upright position before turning on the hotplate burners.
- Not all models are fitted with the shut-off system.

## Operation

### WARNING

#### On separate oven & Grill cookers

- The grill area can get hot when the oven is in use, even if the grill is switched off.
- Care should be taken when removing pans from the grill, i.e. use of oven gloves, and by making use of the removal grill pan handle.
- Care should be taken when using oven as knobs and handle may become hot.

## Important

- The grill pan supplied is multi functional, for use in grill or oven.
- The handle design allows removal or insertion whilst the pan is in use.
- Always remove the handle when the pan is in use.
- The grill MUST only be used with the door open.

## Using the Grill

1. Ensure gas cylinder/supply is connected and turned on. In the event of a gas smell turn off at gas cylinder/mains and contact supplier.
2. To light: Open door, push in the control knob and turn to full rate – see Fig 1 (page 143). Hold a lighted match or taper to the burner and push the control knob in and hold. The burner should ignite and the control knob should be held in for 10 -15 seconds before release.

If the burner goes out, repeat procedure holding control knob for slightly longer.

3. For models fitted with Spark Ignition the procedure is similar except that the burner can be ignited by depressing the ignition button, which is located on the fascia. Ignition must be carried out with the door open, and if the burner has not lit within 15 seconds the control knob should be released and the grill left for at least 1 minute before a further attempt to ignite the burner.
4. **Note:** the grill must only be used with the door open.
5. On first use of the grill, it should be heated for about 20 minutes to eliminate any residual factory lubricants that might impart unpleasant smells to the food being cooked. A non-toxic smoke may occur when using for the first time so open any windows and turn on mechanical ventilators to help remove the smoke.
6. Although the grill does heat up quickly, a few minutes preheat is recommended.
7. Flame Failure Device (FFD): the grill burner is fitted with a flame sensing probe, which will automatically cut off the gas supply in the event of the flame going out. In the event of the burner flames being accidentally extinguished, turn off the burner control and do not attempt to re-ignite the burner for at least one minute.

8. It is normal for the flames on this burner to develop yellow tips as it heats up.

9. A reversible grill pan trivet enables the correct grilling height to be achieved.

Fast Toasting	trivet in high position
Grilling Sausages	trivet in high position
Grilling Steak/Bacon	trivet in high position
Grilling Chops, etc	trivet in low position
Slow Grilling	trivet removed

## COOKER

10. To turn off: turn the control knob until the line on the control knob is aligned with the dot on the control panel. Always make sure the control knob is in the off position when you have finished grilling.

### Using the Oven

1. Ensure gas cylinder/supply is connected and turned on. In the event of a gas smell turn off at gas cylinder/mains and contact supplier.
2. To light: Open door, push in the control knob and turn to full rate (240°C). Hold a lighted match or taper to the burner and push the control knob in and hold. The burner should ignite and the control knob should be held in for 10 - 15 seconds before release.  
If the burner goes out, repeat procedure holding control knob for slightly longer.
3. For models fitted with Spark Ignition the procedure is similar except that the burner can be ignited by depressing the ignition button, which is located on the fascia. Ignition must be carried out with the door open, and if the burner has not lit within 15 seconds the control knob should be released and the oven left for at least 1 minute before a further attempt to ignite the burner.
4. Place the oven shelf in the required position and close the door. Set control knob to approximately 200°C and heat the oven for about 30 minutes to eliminate any residual factory lubricants that might impart unpleasant smells to the meals being cooked. A non-toxic smoke may occur when using for the first time so open any windows and turn on mechanical ventilators to help remove the smoke.
5. Although the oven does heat up quickly, it is recommended that a 10 minute preheat be allowed. The oven should be up to full temperature in about 15-20mins.
6. To turn off: turn the control knob until the line on the control knob is aligned with the dot on the control panel.
7. Shelf: the shelf has been designed to allow good circulation at the rear of the oven and

is also fitted with a raised bar to prevent trays or dishes making contact with the back of the oven. To remove a shelf, pull forward until it stops, raise at front and remove.

### Important

The pans and trays supplied with this appliance are the maximum sizes recommended for use. Larger pans and trays may restrict good circulation of heat, increasing cooking times.

### Oven Temperature Control

The temperature in the oven is controlled by a thermostatic gas tap and is variable over the range 130°C to 240°C. The temperatures indicated refer to the centre of the oven and at any particular setting the oven will be hotter at the top and cooler towards the base.

The variation between top and centre, and centre to bottom is approximately equivalent to one gas mark. Good use can be made of the temperature variation in several dishes requiring different temperatures may be cooked at the same time. In this way maximum benefit can be obtained from the gas used to heat the oven. Care should be taken not to overload the oven, adequate spacing being used to allow free circulation for heat.

## Operation

### Cooking Guidelines

Best results will be obtained by the shelf positions in this guide. It is not necessary to preheat the oven but advisable for a range of dishes. The oven is capable of full temperature in 15-20 minutes.

Most cookery books give details of the shelf positions and gas mark settings for each recipe. If in doubt about a recipe you intend to use, study the recipe carefully then find a similar dish in our guide and use our shelf position and gas mark setting recommendation.

Shelf positions are from the top down. When roasting with aluminium foil care must be taken that the foil does not impair circulation or block the oven flue outlet.

### Do's and don'ts

**Do** read the user instructions carefully before using the appliance for the first time.

**Do** allow the oven to heat before using for the first time, in order to expel any smells before the introduction of food.

**Do** clean the appliance regularly.

**Do** remove spills as soon as they occur.

**Do** always use oven gloves when removing food shelves and trays from the oven.

**Do** check that controls are in the off position when finished.

**Don't** allow children near the cooker when in use. Turn pan handles away from the front so that they cannot be caught accidentally.

**Don't** allow fats or oils to build up in the oven trays or base.

**Don't** use abrasive cleaners or powders that will scratch the surfaces of the appliance.

**Don't** under any circumstances use the oven as a space heater.

**Don't** put heavy objects onto open grill and oven doors.

### Leaks

If a smell of gas becomes apparent, the supply should be turned off at the cylinder

**IMMEDIATELY**. Extinguish naked lights including cigarettes and pipes. Do not operate electrical switches. Open all doors and windows to disperse any gas escape. LPG gas is heavier than air; any escaping gas will therefore collect at a low level. The strong unpleasant smell of gas will enable the general area of the leak to be detected. Check that the gas is not escaping from an unlighted appliance. Never check for leaks with a naked flame, leak investigation should be carried out using a leak detector spray.

## Maintenance & servicing

### Important

- Shut off gas supply at isolating valve, switch off electric supply and ensure all parts are cool before cleaning or servicing
- All servicing must be carried out by an approved competent person.
- After each service the appliance must be checked for gas soundness
- This appliance must not be modified or adjusted unless authorised and carried out by the manufacturer or his representative. No parts other than those supplied by the manufacturer should be used on this appliance.
- If the supply cord is damaged, it must only be replaced by the manufacturer or his representative in order to avoid a hazard.

This appliance needs little maintenance other than cleaning. All parts should be cleaned using warm soapy water. Do not use abrasive cleaners, steel wool or cleansing powders.

When cleaning the burner ring it is essential to ensure that the holes do not become blocked. The control knobs are a push fit and can be removed for cleaning. They are interchangeable without affecting the sense of operation.

# MICROWAVE

## Microwave oven general user instructions

Always refer to the microwave operating instructions supplied with the vehicle

Precautions to avoid possible exposure to excessive microwave energy

### **WARNING:**

Do not attempt to operate this oven with the door open since open door operation can result in harmful exposure to microwave energy. It is important not to defeat or tamper with the safety interlocks.

### **WARNING:**

Do not place any objects between the oven front face of the door or allow soil or cleaner residue to accumulate on sealing surfaces.

### **WARNING:**

If the door or door seals are damaged, the oven must not be operated until it has been repaired by a competent person (1) door broken (2) hinges and latches (broken or loosened), (3) door seals and sealing surfaces.

### **WARNING:**

It is hazardous for anyone other than a competent person to carry out a service or repair operation.


### **WARNING:**

Liquids or other foods must not be heated in sealed containers since they are liable to explode.

### **WARNING:**

Only allow children to use the oven without supervision when adequate instruction has been given so that the child is able to use the oven in a safe way and understands the hazards of improper use.

## Important safety guidance

 **WARNING:** To prevent fire, burns, electric shock and other warnings: Listed below are, as with all appliances, certain rules to follow and safeguards to assure high performance from this oven:

### Important instructions

1. Do not use the oven for any reason other than food preparation, such as for drying clothes, paper, or any other non food items or for sterilizing purposes.
2. Do not use the oven when empty, this could damage the oven.
3. Do not use the oven cavity for any type of storage, such as papers, cookbook, cookware etc.
4. Do not operate the oven without the glass tray in place. Be sure it is sitting properly on the rotating base.
5. Make sure you remove caps or lids prior to cooking when you cook food sealed in bottles.
6. Do not put foreign material between the oven surface and door. It could result in excessive leakage of microwave energy.
7. Do not use recycled paper products for cooking. They may contain impurities which could cause sparks and/or fires when used during cooking.
8. Do not pop popcorn unless popped in a microwave approved popcorn popper or unless it's commercially packaged and recommended especially for microwave ovens. Microwave popped corn produces a lower yield than conventional popping; there will be a number of unpopped kernels. Do not use oil unless specified by the manufacturer.
9. Do not cook any food surrounded by a membrane, such as egg yolks, potatoes, chicken livers, etc., without first piercing them several times with a fork.

10. Do not pop popcorn longer than the manufacturer's directions. (Popping time is generally below 3 minutes). Longer cooking does not yield more popped corn it can cause scorching and fire. Also, the cooking tray can become too hot to handle or may break.
11. If smoke is observed, switch off or unplug the appliance and keep the door closed in order to stifle any flames.
12. When heating food in plastic or paper containers, keep an eye on the oven due to the possibility of ignition.
13. The contents of feeding bottles and baby food jars shall be stirred or shaken and the temperature checked before consumption, in order to avoid burns.
14. Always test the temperature of food or drink which has been heated in a microwave oven before you give it to somebody, especially to children or elderly people. This is important because things which have been heated in a microwave oven carry on getting hotter even though the microwave oven cooking has stopped.
15. Eggs in their shell and whole hard-boiled eggs should not be heated in microwave ovens since they may explode, even after microwave heating has ended.
16. Keep the waveguide cover clean at all times. Wipe the oven interior with a soft damp cloth after each use. If you leave grease or fat anywhere in the cavity it may overheat, smoke or even catch fire when next using the oven.
17. Never heat oil or fat for deep frying as you cannot control the temperature and doing so may lead to overheating and fire.
18. Liquids, such as water, coffee, or tea are able to be overheated beyond the boiling point without appearing to be boiling due to surface tension of the liquid. Visible bubbling or boiling when the container is removed from the microwave oven is not always present. **This could result in very hot liquid suddenly boiling over when a spoon or other utensil is inserted into the liquid.**

#### To reduce the risk of Injury to persons:

- a. Do not overheat the liquid.
- b. Stir the liquid both before and halfway through heating it.
- c. Do not use straight-sided containers with narrow necks.
- d. After heating, allow the container to stand in the microwave oven for a short time before removing the container
- e. Use extreme care when inserting a spoon or other utensil into the container.

#### Care of the microwave

1. Turn the oven off before cleaning
2. Keep the inside of the oven clean. When food spatters or spilled liquids adhere to oven walls, wipe with a damp cloth. Mild detergent may be used if the oven gets very dirty. The use of harsh detergent or abrasives is not recommended.
3. The outside oven surface should be cleaned with soap and water, rinsed and dried with a soft cloth. To prevent damage to the operating parts inside the oven, water should not be allowed to seep into the ventilation openings.
4. If the central panel becomes wet, clean with a soft dry cloth. Do not use harsh detergents or abrasives on Control Panel.
5. If steam accumulates inside or around the outside of the oven door, wipe with a soft cloth. This may occur when the microwave oven is operated under high humidity conditions and in no way indicates malfunction of the unit.
6. It is occasionally necessary to remove the glass tray for cleaning. Wash the tray in warm sudsy water or in a dishwasher.
7. The roller guide and oven cavity floor should be cleaned regular/y to avoid excessive noise. Simply wipe the bottom surface of the oven with mild detergent water or window cleaner and dry. The roller guide may be washed in mild sudsy water.

## MICROWAVE

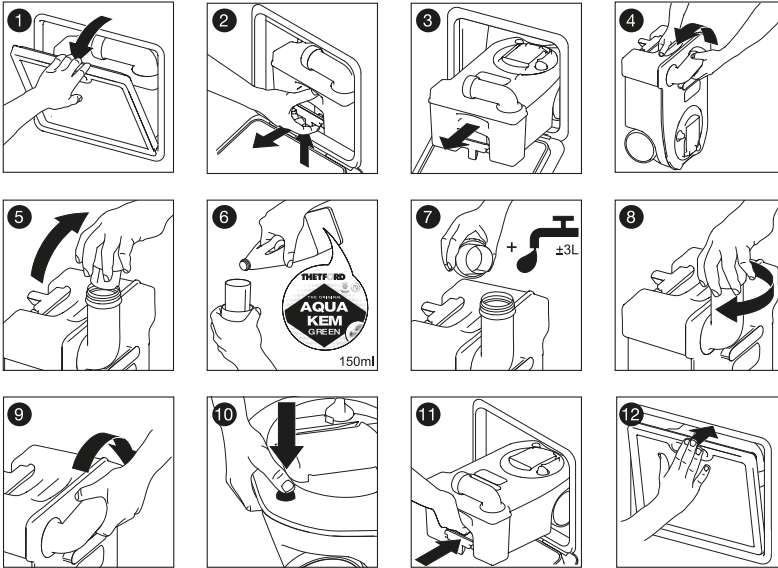
8. The oven should be cleaned regularly and any food deposits removed;
9. Failure to maintain the oven in a clean condition could lead to deterioration of the surface that could adversely affect the life of the appliance and possibly result in a hazardous situation.



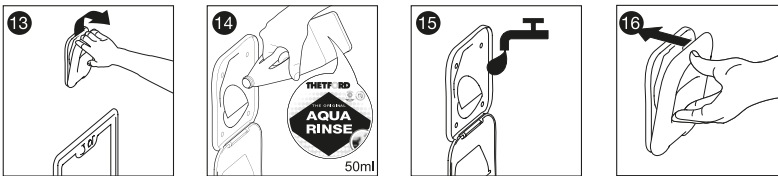
## Thetford C260 Cassette Toilet

### Quick Guide

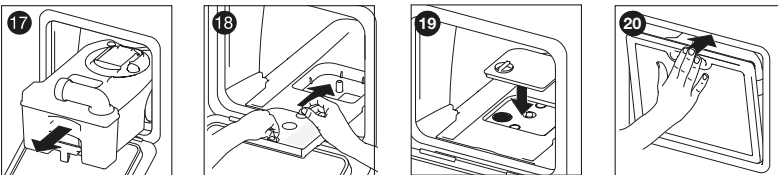
#### Preparing waste holding tank



#### Preparing flush-water tank (only for C262-models)

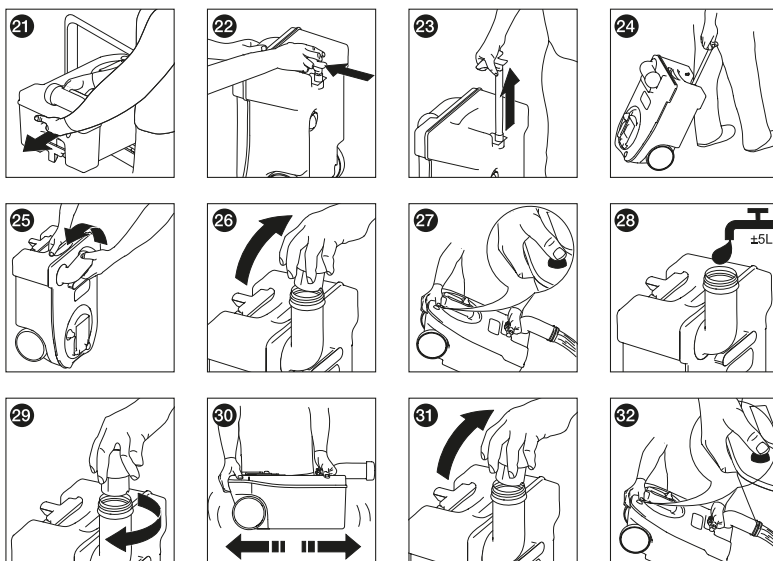


#### Preparing Electric Ventilator (if applicable)

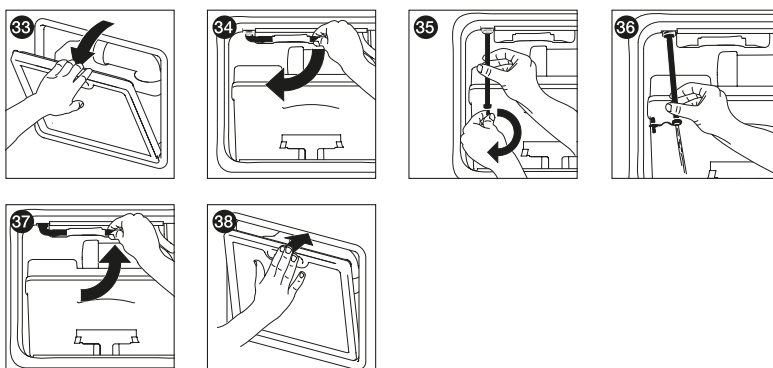


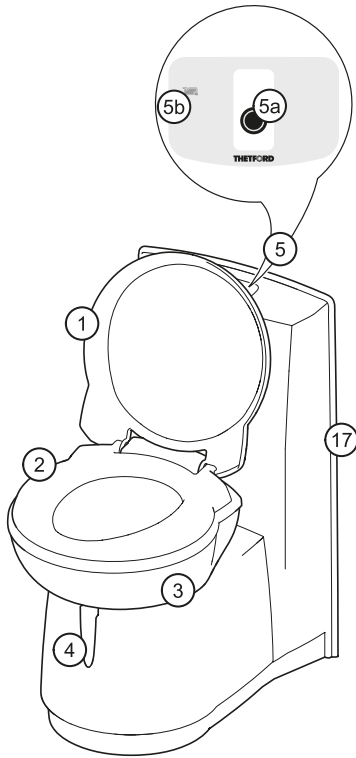
# CASSETTE TOILET

## Emptying waste-holding tank



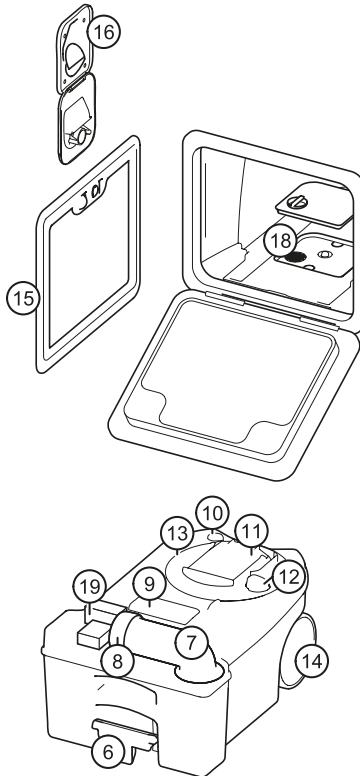
## Emptying flush-water tank (only for C262-models)





### Standard

1. Cover
2. Seat
3. Swivelling toilet bowl
4. Blade handle to open/close blade
5. Control panel (position is different on C263 models)
- 5a. Flush button
- 5b. Waste holding tank level indication (1 level or 3 levels; dependent on model)
6. Pull handle
7. Pour out spout
8. Cap with measuring cup
9. Automatic pressure release vent
10. Vent button



11. Sliding cover
12. Blade opener
13. Waste holding tank mechanism
14. Wheel
15. Service door 3

### Options

16. Waterfill door (only for C262 models)
17. Console with flush water tank (only for C262 models)
18. Filter for electric ventilator
19. Location waste pump out system

## CASSETTE TOILET

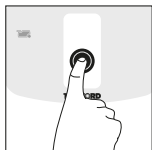
### Introduction

This Thetford Cassette Toilet is a high quality product. It is user-friendly, meets high quality standards and gives you all the convenience of home.

Before operating and using this toilet we advise you to read the manual completely. Keep this manual in a safe place for future reference.

**For the latest version of the manual please visit [www.thetford.eu](http://www.thetford.eu)**

### Possible toilet options



Some toilets are fitted with extra options. To check which options are available, press the flush button on the control panel.

#### The following symbols can light up:

- **Waste pump out system** - transfers waste from the waste holding tank into the vehicle's central waste tank.
- **Electric blade** - electrically opens or close the blade.
- **Electric ventilator** - draws unpleasant odours away from the waste tank to the outside of the vehicle.

You will find additional to these options in the grey text boxes. Thoroughly read the applicable instructions.

#### Preparing for use

This cassette toilet has a waste holding tank of 17.5L. A C262 model also has its own 8L flush water tank. Before using your toilet, it is vital that you add toilet additive to these tanks. Check the correct dosage on the additive package. Then add ±3L of water to the waste holding tank. Fill the flush water tank of a C262 model to the top.

#### Electric ventilator (if applicable)

Open the service door and remove the waste holding tank. Then remove the filter housing cover and place the new filter into the filter housing. Replace the cover and return the waste holding tank back to original position.

**⚠ WARNING:** Never add toilet additives directly via the blade as this could damage the lip seal of the waste holding tank. Only fill the waste holding tank via the pour out spout.

**⚠ WARNING:** Never use force if you cannot get the waste holding tank back into place easily. If blockage occurs, always check if the blade handle is in the closed position.

See Quick guide diagrams 1-20 for visual reference. To depressurise the waste holding tank, press the vent button before placing the tank back in its position.

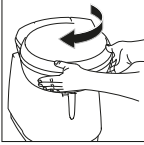
Thetford offers a pleasantly scented toilet fluid for the flush water tank (Aqua Rinse) and a variety of waste holding tank products (Aqua Kem Blue, Aqua Kem Green, Aqua Kem Natural, Aqua Kem Sachets).

Aqua Rinse keeps the flush water fresh, ensures a smooth flush and leaves a protective layer. All products for the waste holding tank suppress unpleasant smells, stimulate the breakdown of waste, reduce the formation of gas, protect moving parts and help to the waste holding tank fresh and clean. For the differences between the distinguishing qualities of each waste holding tank product please visit [www.thetford.eu](http://www.thetford.eu)

The range of available Toilet Care products may vary for each country.

## Use of your toilet

### Turning the bowl



You can turn this bowl to a desired position (max.  $\pm 90^\circ$ ). Close the cover and use both hands to rotate the bowl as illustrated.

### Opening the blade

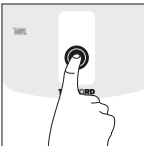


The toilet can be used with the blade open or closed. To open the blade, slide the blade sideways as illustrated. Make sure you always close the blade completely after use.

### Electric blade (if applicable)

Press the flush button to activate the control panel. Then push the Electric blade button. The blade will open or close electrically.

### Flushing the toilet



Press the flush button once to activate the control panel. Then press the flush button for several seconds to flush the toilet.

### Electric ventilator (if applicable)

By activating the control panel, the Electric ventilator start automatically. The button will flash to indicate this function is active. To stop the Electric ventilator, press the button. Press the button again to restore the Electric ventilator. To optimise its function, activate the Electric ventilator before use of your toilet.

**Note:** Even without an own flush water tank you can still use Aqua Rinse for a smooth and fresh lavender scented flush. Simply spray Aqua Rinse with a spray can evenly into the toilet bowl before use.

**Note:** Ordinary toilet paper can cause clogging. Use Aqua Soft toilet paper instead. This toilet paper is super soft, dissolves quickly, prevents clogging and makes it easier to empty the waste holding tank.

### Level indication

You can check whether your waste holding tank has a 1 level or a 3 level indication. Make sure the tank is empty and place it properly. Then activate the control panel. If no level indication light lights up, your toilet has a 1 level indication. It will only indicate a full tank. If a green level indication light immediately lights up, your toilet has a 3 level indication. It will indicate empty, half full and full.

## Emptying the tank

### Waste holding tank

When the red light of the level indicator on the control panel lights up, you need to empty the waste holding tank. Remove the tank via the service door. Then take it to an authorised waste disposal point. Empty the waste holding tank via the pour out spout.

### Waste pump out system (if applicable)

By activating the control panel, this button automatically lights up. Press the button to empty the waste holding tank into the vehicle's central waste tank. The button flashes while the waste is being pumped and stops flashing when all waste has been transferred. ( $\pm 1.5L$  of waste is left). If the central waste tank is too full (only measured when this tank has a level indicator), the button flashes rapidly and no pump out is possible until you have emptied the central waste tank.

See 'Quick guide' diagrams 21-32 for visual reference. If you want to continue using your toilet after emptying, prepare the waste holding tank again.

## CASSETTE TOILET

**Note:** Our 'green' products Aqua Kem Green, Aqua Kem Natural and Aqua Rinse (test ISO 11734) are absolutely safe to empty into a septic tank or small biological systems on camping sites.

**⚠ WARNING:** Please avoid travel with a waste holding tank that is more than 3/4 full. This may cause leakage through the venting system.

### Flush water tank (only for C262 models)

The flush water tank has a capacity of 8L. Only empty the flush water tank completely if you don't expect to use your toilet for a long (winter) period. Place a sufficiently large bowl under the drain tube and catch the remaining water. Empty this bowl at an authorised waste disposal point.

See 'Quick guide' diagrams 33-38 for visual reference.

**⚠ WARNING:** To prevent water damage to your caravan, ensure you don't travel with a full flush water tank or with water in the bowl.

### Cleaning

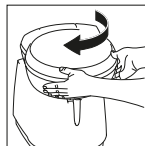
Just like your toilet at home, it is also important to clean this cassette toilet regularly. You will prevent limescale and ensure optimal hygiene. Clean the inside of the bowl with toilet bowl cleaner and a soft brush and use bathroom cleaner for the outside of the toilet.

**⚠ WARNING:** Never use the household cleaners to clean your toilet. These may cause permanent damage to the seals and other toilet components.

### Waste pump out system (if applicable)

Fill the emptied waste holding tank with water and place the tank back. Then activate the control panel. Press the waste pump out system button to pump the water through the system. Do this once every 3 weeks.

### Remove seat and cover



To clean your toilet thoroughly, remove the seat and cover. First push the seat and cover together to the right then lift them up.

### Winter use

You can use your toilet as normal in cold weather as long as the toilet is situated in a heated location. If this is not the case, and there is a risk of frost, we advise not to use your toilet. Make sure you completely empty the waste holding tank. For a C262 model also empty the flush water tank.

**Note:** Aqua Kem Sachets are particularly suitable for winter camping as the sachets are filled with powder. They completely dissolve in water, are easy to dose and economical in use.

### Maintenance

To prolong the life span of your toilet, maintain your toilet regularly. Use cassette tank cleaner 2 to 3 times a year on the waste holding tank.

It safely removes stubborn limescale on the inside of the tank. When seals become dry, use seal lubricant to keep the seals soft and pliable. It has been specially developed for mobile toilets and is absolutely safe to use.

**⚠ WARNING:** Never use Vaseline or vegetable oil to lubricate the seals as these may cause leakage to your waste holding tank.

### Waste pump out system (if applicable)

To ensure optimal functionality, maintain the waste holding tank regularly. Fill the waste holding tank with water and rinse it. Then use Cassette Tank Cleaner. Do this every 6 weeks when on holiday.

## CASSETTE TOILET

**Electric Ventilator (if applicable)**

After approximately 4 weeks of use, the filter loses its absorption power. Remove the filter housing cover and place the new filter into the new housing.

**Storage**

If you don't expect to use your toilet for a long period, you have to thoroughly empty, clean and dry the whole toilet. Also empty the flush water tank of a C262 model. This is also a good moment to maintain your toilet. During storage we advise leaving the blade open to prevent damage to the blade and to loosen the cap of the pour out spout to ventilate the waste holding tank.

**Electric ventilator (if applicable)**

Remove the filter of the filter housing.

**Disposal**

Your product has been designed and manufactured with high quality material and components, which can be recycled and reused. When your toilet has reached the end of its life, dispose of the product according to the local rules. Do not use the toilet with the normal household waste. The correct disposal of your old product will help prevent potential negative consequences for the environment and human health.

**Questions?**

If you require further information or have any questions about your toilet, please visit our website [www.thetford.eu](http://www.thetford.eu) If you still have questions, contact the Customer Service Department in your country or your holiday location.

For correct and efficient support, please ensure all relevant product type information is available.

**Spare parts**

Original Thetford spare parts are available through your own dealer or an authorised Thetford Service Centre.

**FAQs**

**What should I do in case of a defect on my Thetford toilet?** Contact your dealer where you bought your vehicle, or if you are on holiday, contact an authorised Thetford Service Centre.

**A red light on the control panel flashes, what should I do?** Check if the waste holding tank is present or positioned properly.

**I cannot move my waste holding tank.** Check if the blade of your toilet is completely closed.

**What should I do when the electric blade doesn't function?** Manually open or close the blade by sliding the small handle under the toilet bowl sideways.

**What should I do if the blade is blocked?** Loosen the cap with measuring cap from the pour out spout and try again.

**Does the toilet have a fuse?** Yes, the toilet has a maintenance free self-resetting fuse.

**Warranty**

Thetford BV offers the end users of its products a three-year guarantee. In the case of malfunction within the warranty period, Thetford will replace or repair the product at its discretion. In this case, the costs of replacement, labour costs for the replacement of defective components and/or the costs of the parts themselves will be paid by Thetford.

1. To make a claim under this guarantee, the user must take the product to his dealer or an authorised Thetford Service Centre ([www.thetford.eu](http://www.thetford.eu)). The claim will be assessed there.

## CASSETTE TOILET / EXTERNAL BBQ POINT

2. Components replaced during repair under guarantee become the property of Thetford.
3. This warranty does not prejudice current consumer protection laws.
4. This warranty is not valid in the case of products that are for, or are used for, commercial purposes.

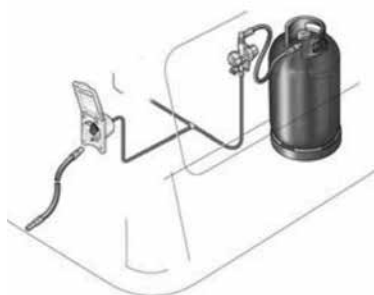
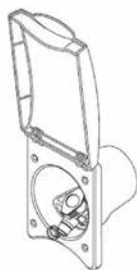
Guarantee claims falling into one of the following categories will not be accepted:

- the product has been improperly used or the instructions in the manual have been followed (for example incorrect use of additives;
  - alterations have been made to the product;
  - the product has been repaired by an unauthorised Thetford Service Centre;
  - the product code or serial ID has been changed;
  - the product has been damaged by circumstances outside the normal use of the product.
5. Not using Thetford products to care for your Thetford toilet could create some damage, which would not be covered by this warranty.

Thetford is not liable for any loss and/or damage caused directly or indirectly by use of the toilet.

### Caravans with external barbeque point (when fitted)

Models equipped with an external barbeque point can be used to power any gas appliance suitable for the gas used in the caravan, at the working pressure shown on the label in the barbeque outlet box. Please note when using the outlet that the fitted regulator will allow a maximum of 1.5kg per hour of gas to be taken from the gas bottle. Therefore the consumption of gas from both the appliances within the caravan and the appliance connected to the barbeque point cannot exceed a total of 1.5kg per hour at any one time. If you are in any doubt please consult your dealer for advice. To use point proceed as follows:



When external gas equipment is being connected, the operating pressure of the gas supply of 30 or 50 mbar must correspond with the operating pressure of the equipment that is being connected (see data plate).

The plug-in connection can only be made if the quick acting valve is closed. The safety locking mechanism can be released by sliding back the coupling sleeve.



## EXTERNAL SHOWER POINT

The coupling K-valve is designed such that the quick acting valve can only be opened if the connection has been made via the plug-in connection. The connection is made by inserting the plug-in connection into the safety coupling.

This operation can be carried out using one hand. After uncoupling the equipment, seal off the valve opening using the protection seal.

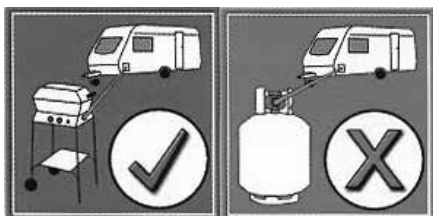
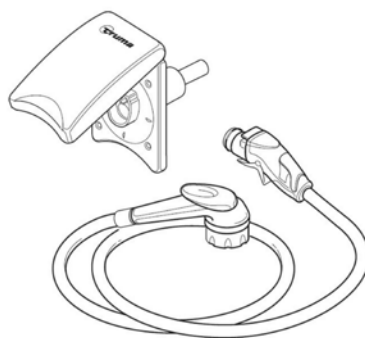
**Note:** The external gas socket is only suitable for removing gas, not for feeding gas into the gas system.

**⚠ WARNING:** Care should be taken when using the external barbecue point. Never barbecue next to an awning or tent.

**⚠ WARNING:** The caravan barbecue point should only be used as an outlet point for gas, never connect a gas bottle direct to the outlet.

### External shower point (when fitted)

The external shower point, is supplied with a separate shower head and hose assembly. To connect the shower, simply align the plug with the socket and push into position. To remove, pull the lower trigger and pull the plug from the socket.

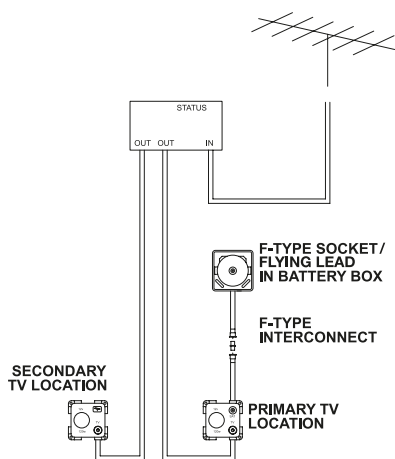


## TV INLET/CD/MP3 TUNER

**Caravans with TV inlet in battery box (when fitted)**

Models equipped with TV points in the battery box have the facility to take an external signal and supply that signal to TV points within the caravan.

Caravans equipped in this way feature a direct link from the connection point in the battery box, to an auxiliary connection point at the primary TV position within the caravan.



The direct link can be used to:

1. Supply an external signal (caravan site TV feed) to the primary TV position
  - a. Connect the socket in the battery box (on flying lead depending on model), with a suitable lead, to the appropriate socket on the caravan site supply post. As the connector in the battery box is a screw on 'F-type' connector, an adaptor to convert this to a 'push-on' co-ax connector, which may be required, has been supplied with your caravan.
  - b. Locate the primary TV position within the caravan. At the 12V, TV and SAT socket, connect your TV to the output from the socket marked SAT with a suitable lead.
2. Connect an external satellite dish to a decoder within the caravan. (The direct link uses F-type interconnects throughout

allow the decoder and dish to communicate correctly)

- a. Connect the dish to the socket (or flying lead) in the battery box with a suitable lead. The F-type to co-ax adaptor should not be used.
- b. Connect the dish input connection on the decoder to the 'SAT' socket on the 12V, TV and SAT socket located in the primary TV location.
3. Supply a signal from within the caravan to the exterior of the caravan
  - a. Connect the output from your VCR, DVD player or other device to the SAT connection on the 12V, TV and SAT socket at the primary TV position.
  - b. Connect your receiving device (TV or similar) to the socket in the battery box with a suitable lead.

As can be seen from the simplified schematic, when multiple TV locations are present in a van, all of these receive signals from the TV aerial connection box. Using adaptors and link cables which are readily available, it may be possible to re-direct a signal from the 'SAT' connection at the primary TV location, up to the aerial connection box to be then distributed to other TV positions within the caravan. Please remember that as the number of connections increases the quality of the signal reduces.

**Supplier fitted / supplied entertainment equipment**

Audio-visual equipment may have been fitted by your dealer, or supplied with the caravan, depending on the specification of the caravan. Although not specific, below are details of the types of equipment which would be fitted as appropriate to the specification of the caravan:

## TV INLET/CD/MP3 TUNER

## CD/MP3/TUNER WITH AUXILIARY INPUT

Provision has been made in the furniture for your dealer to install a provided head unit similar in appearance to that fitted in the dashboard of a car. The unit operates as a CD player and FM/AM radio. In addition MP3 files stored on a CD can be read and played by the unit. Speakers mounted in the front locker of the caravan are connected to this head unit for a stereo sound output. A retractable AM/FM aerial on the side of the caravan, enables reception of radio stations.

An auxiliary input on the front of the unit allows a separate MP3 player or similar to be connected from that player's headphone socket. The can be positioned in the locker and connected directly to the front of the head unit, using an appropriate lead (not supplied), or alternatively can be connected at a socket on the binnacle at the front of the caravan, again using an appropriate lead.

To use the connection on the binnacle, plug the flying lead found in the locker below the head unit, into the 'Aux In' socket on the front of that head unit. At the binnacle, locate the 3.5mm jack socket near the centre of the binnacle. Using an appropriate lead, (not supplied) connect your player's headphone socket to the jack socket on the binnacle, to relay sound up to the head unit. Depending on the specification of the head unit, 'Aux in' may need to be selected as an audio source on the head unit, and the volume levels of both the head unit and the player may have to be adjusted to find an appropriate sound level.

## STATUS DIRECTIONAL TV AND FM RADIO ANTENNA

Firstly determine the approximate location of the nearest transmitter and whether the signals are horizontally or vertically polarized. For assistance ask your site operator or check antennas in the vicinity

1. Loosen the Mast Locking Collar and Wall Bracket and raise the antenna. Turn the mast to direct the Antenna towards the TV transmitter.

The RED spot on the bottom of the mast indicates the front of the Antenna.

2. When receiving vertically polarized signals, rotate the winder anti-clockwise to cant the antenna through 90°. The red / green indicator, if present, indicates vertical or horizontal orientation.

**Note:** Direction assumes user is looking down on roof.

**Note:** DO NOT over tighten or use undue force on the winder.

3. Switch ON the Power Pack and the RED LED will illuminate.
4. Check the gain control switch is set to normal – NML.
5. Tune your television to the strongest signal. You may need to adjust the direction of the mast to achieve the best quality picture.
6. Secure by tightening the Mast Locking Collar and Wall Bracket

## Removing the antenna

A permanently fitted Status can be easily removed leaving only the Mounting Foot and rubber gaiter.

1. Unplug the antenna from the Power Pack.
2. Loosen the Mast Locking Collar and Wall Bracket and lift off whilst feeding out the cable.
3. Push the Blanking Cap supplied into place.

**⚠ WARNING:** The Blanking Cap is a temporary seal and is not for long term use.

**⚠ WARNING:** Always ensure the aerial is lowered before driving off.

## BEDDING/BLINDS

### Bedding configurations

Sleeping bags and duvets can be compressed into small spaces and can be ready to use in minutes.



Fig. A



Fig. B

#### Lower single beds assembly (Figs. A & B)

1. Lower dinette table and place between the recess in both seats.
2. Arrange seat cushions as appropriate.

#### Double bed assembly (Fig. C)

1. Grip front of slatted bed and walk backwards until bed is fully extended.
2. Arrange seat cushions as appropriate.



Fig. C

#### Lift-up bunks

1. Grasp the bunk and pull carefully upwards and towards you. **(Fig. D)**
2. The bunk is designed to automatically move into the correct position. **(Fig. E)**
3. Where a bed board is fitted, unfold and make sure it is secured by press studs when lifted into position. (The bed board is required to protect both the occupant and the window from damage during use of the bunk.) **(Fig. F)**
4. Locate safety boards. **(Fig. G)**
5. Arrange seat cushions as appropriate. **(Fig. G)**

Bunks are designed to carry a child to a maximum of 70kg (11 stone)

**⚠ WARNING:** use the upper bunks for sleeping only, with the provided protection against fall out in position.

**⚠ WARNING:** Care shall be taken against the risk of fall out when the upper bunks are in use by children especially under 6 years of age, these bunks are not suitable for use by infants without supervision.

# BEDDING/BLINDS



Fig. D



Fig. E

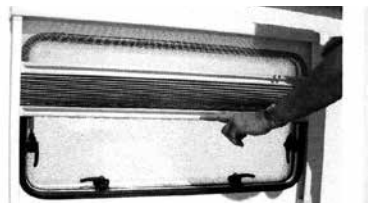


Fig. F



Fig. G

## Operating instructions for softrollo blinds



Hold the operating aluminium bar in the middle and raise or lower the blind and flyscreen independently, operating together will require excessive force in operation.

**Care instructions:** Clean the blind only with a damp sponge. Clean on a regular basis to avoid dirt particle build up as this can damage the blind material.

Use only water or with mild suds or a vacuum cleaner.

In order to avoid material fatigue, do not leave the flynet closed for a long time.

## Maintenance

If operation of the soft Rollo blind is exceptionally stiff, it is possible to spray the guide - legs (left and right) with a Teflon - spray. This will ease both the operation of the blind and avoid any interruption/malfunction from deposits in the guide legs which may affect the operation.

## DOORSCREEN / ROOF LIGHTS / EXTERIOR DOOR

### Doorscreen

The door flyscreen is tracked top and bottom. When drawing or releasing the doorscreen, care should be taken to always pull the doorscreen close to the centre. It is not advisable to pull close to the top or bottom as this will cause snagging and uneven running.



**⚠ WARNING:** When opening or releasing the doorscreen, care must be taken to avoid trapping fingers.

The door flyscreen operates independently of the door by sliding across the door threshold.

### Roof lights

When opening the roof lights, care must be taken to release the locking mechanism as the unit is raised.

Roof lights must be fully closed when towing.

Roof lights provide varying levels of fixed ventilation.

### Exterior Door Key

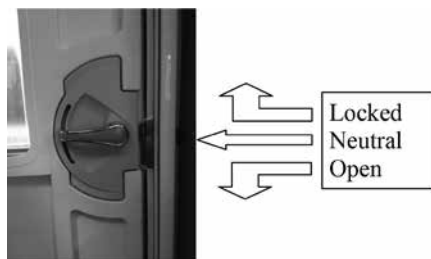
**⚠ WARNING:** Care should be taken not to leave the exterior door key in the door when unlocking the door. The key may result in damage in the vehicle side if the door is released with the key still in the lock.

### Exterior Door Operating Instructions

To un-lock the door, insert the key and turn clockwise ensuring the key is removed before the door is opened to prevent damage to the caravan side.



There are 3 primary positions for the internal handle inside the caravan, these are locked, neutral and open. When closing the door from the inside the caravan ensure the handle is in the neutral position, the handle **MUST NOT** be partially up in the locked position as this will prevent the door from closing causing damage to the door.



The door blind slides vertically within the door cassette.



**⚠ WARNING:** The door retainer is designed to hold the door in normal conditions. In gusty or windy conditions we recommend the door is closed to prevent it releasing and slamming shut.

## Windows

To open all window types turn the internal handles through 90 degrees and push open the window.

## Windows / Roller Blind Advice

In case of prolonged exposure to the sun roller blinds should not be completely closed as this could cause excessive heat concentration at the top of the window, due to characteristics of the glazing material the windows could be adversely affected.

Roller blinds that shade from the bottom upwards it is necessary to leave a gap of a few centimetres open at the top, this way the heat between window and blind can escape. A fly screen does not cause an obstruction.

Roller blinds that shade from the top downwards must be kept completely open, or be opened regularly to allow the heat to escape.

Keeping the windows in ventilation position allows heat to escape.

Never fully close a roller blind system when storing the vehicle or when not in use for longer periods!

Therefore for optimal window life it is recommended:-

- Blinds starting at the bottom of the window a gap should be provided for ventilation at the top with the window in its ventilation position.
- For vehicles containing blinds from the top downwards or with other types of reflective blinds / curtains, please make sure that these blinds are also ventilated or not fully closed.

Ensure that all windows and roof vents are closed when the vehicle travels on the road.

## Heki care instructions

Clean the blind only with a damp sponge. Clean on a regular basis to avoid dust/ dirt particle build up as this can damage the blind material. Use only water or with mild suds or a vacuum cleaner.

In order to avoid material fatigue, do not leave the flynet closed for a long time.

- Clean the dome with the Seitz Acrylic Cleaner.
- Opaque spots and light scratches on the dome can be removed with the Seitz Acrylic Polish and the Seitz Special Polishing cloth.
- Use talcum powder regularly (4 times yearly) to care for the rubber seals supplied with versions without permanent ventilation.
- Clean the blinds only with water and mild soap suds.

## Safety precautions:

- Repairs should be carried out only by trained personnel.
- Inform an approved dealer in case of defects and malfunctions.
- Before starting off, check the rooflight for damage in the dome (tension cracks) and the opening mechanism which could arise owing to, for example, branches and other natural causes.
- Do not step on the dome.
- Close the rooflight before starting off (check whether it is locked).
- Do not leave the vehicle with the rooflight open (danger of burglary).
- Do not open in strong wind or rain.
- Before opening the dome remove snow, ice, dirt etc. from the dome.
- Malfunctions are to be repaired by an approved dealer at once.
- Do not use caustic detergents (danger of tension cracks in the dome).
- Before setting off close the dome, check the locking mechanism and open the blinds.

The guarantee becomes null and void if the care and safety instructions are not followed.

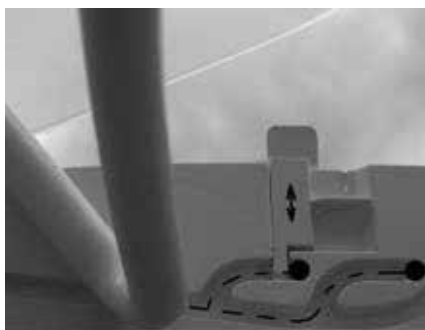
## ROOFLIGHTS

**Mini Heki rooflight (when fitted)**

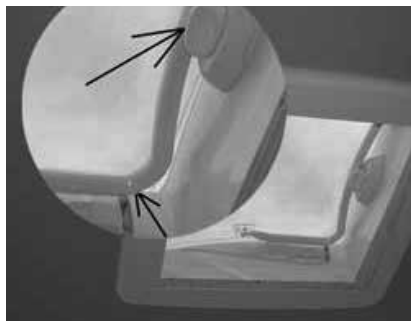
To open depress the button **(Fig. A)**.



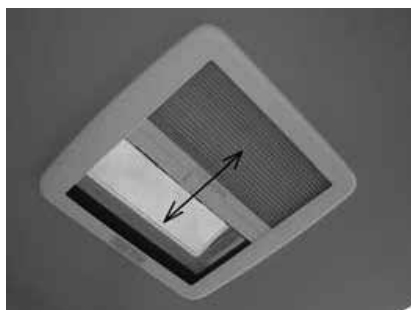
Pull the bar down and forwards **(Fig. B)**.



By pushing the bar in to the marked rest positions **(Fig. C)**.



Two extra opening angles apart from the one in which the dome is fully opened can be chosen. The intermediate position can be fixed with a slide marked with the arrows. Care should be taken to ensure the dome is closed and locked for transit with the bar located behind the locking button **(Fig. D)**.

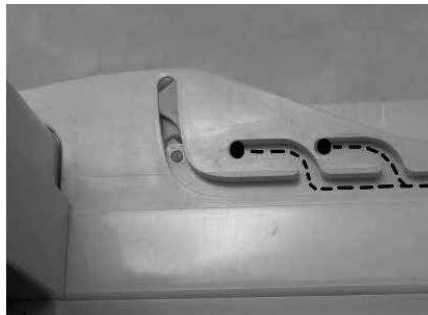
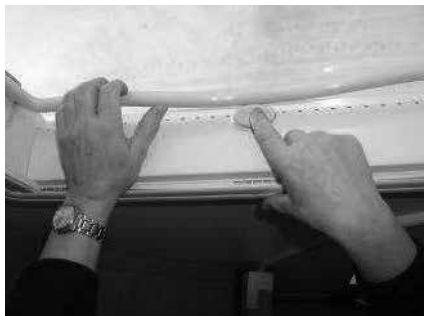


The blind flynet operate together and engage via the clips in the bar, then slide to gain the desired blackout or ventilation **(Fig. E)**.



## Midi-Heki rooflight

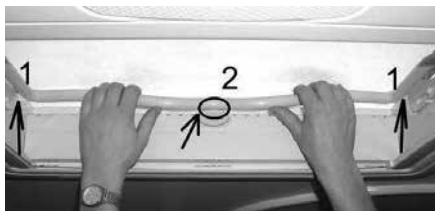
### Opening the Dome



### Closing the Dome

#### (drive and rest position)

Push the bar with both hands on the right and the left side in such a way that the hook bolt (1) the dome on the left and the right side and the bar lies on the push button (2). Check if the dome is locked.



### Intermediate position for the dome

By pushing the bar into the marked rest position, two extra opening angles, apart from the one in which the dome is fully opened, can be chosen.

1



2



## ROOFLIGHTS

### Heki-2 roof light (when fitted)

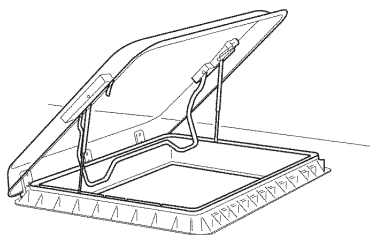
The lift/tilt roof light can be set in 3 positions by means of pneumatic springs.

Position 1 lifts the pane 12mm without allowing rain to enter the caravan.

Position 2 sets the pane to a 150mm opening and locks with a bar.

Position 3 opens the pane through 55°.

A fully adjustable flyscreen and black-out screen are built into the inner frame. The flyscreen can be drawn independently and the black-out screen is variable for partial or full black-out.



Forced ventilation functions via a brush lined duct instead of a ventilated pane.

A cover hood can be fitted for winter protection.

Heki-2 roof lights provide 13,200mm<sup>2</sup> of fixed ventilation.


### Heki 4 Remote Control (when fitted)

The remote control is ready for use after inserting the two batteries and functions within a maximum distance of 1.5m from the Heki rooflight sensor located near the red control lamp on the forward edge of the inner frame. When the power is turned on for the first time or after an interruption in the power supply, the red control lamp will blink. Hold the remote close to the control lamp and press any of the buttons to turn the control lamp off. The light will remain illuminated if the rooflight is not completely closed.

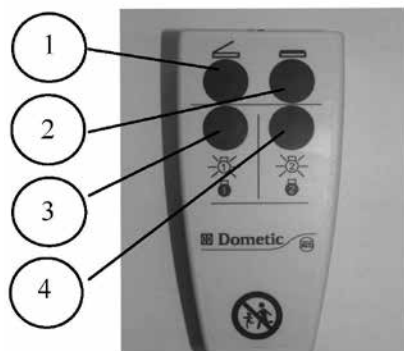
*Red Control Lamp*



### Opening/closing the acrylic dome

Hold the remote control in the direction of the red control lamp. Press button 1  temporarily and the dome will open to 70 degrees. To stop the dome fully opening press button 1 again before it reaches 70 degrees.

Press and hold button 2  to close the roof

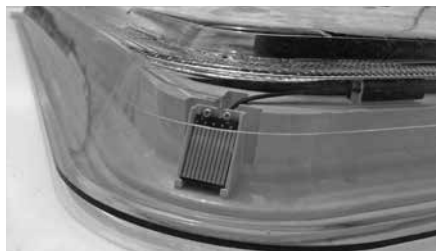


- 1 = open roof      2 = close roof  
3 = light 1 on/off      4 = light 2 on/off

### Lighting (optional)

Buttons 3 and 4 operate the optional lights.

## ROOFLIGHTS

**Rain Sensor**

The Heki 4 rooflight is equipped with an automatic rain sensor which will completely close the dome should moisture be detected. Should you wish to keep the dome open simply press either the opening or closing button to stop it closing.

**⚠ WARNING:**

- Do not operate the control when there are persons near the Heki rooflight.
- Do not stop in the vicinity of the open dome.
- Do not lean out or climb through the open dome. The dome may close automatically if you make contact with the rain sensor or if moisture, (fog, rain, condensation) is present
- Before travelling ensure that the dome is fully closed and the blinds open.

**Blinds**

A fully adjustable flyscreen and black-out screen are built into the inner frame. The fly screen can be drawn independently and the black-out screen is variable for partial or full black-out.

**⚠ EMERGENCY PROCEDURE**

In event of power failure the dome can be closed manually as follows:

- Switch off the power supply from the vehicle to the HEKI
- Remove the ventilation grilles and the covers for the lights.
- Disconnect the 12V plug and power supply from the vehicle.
- Remove the screws from the inner frame and pull down the inner frame.
- Remove the emergency crank from its housing, insert it in the octagonal shaft (See photo) of the driving mechanism and turn. Please note - once the acrylic dome is closed turn the crank a further 2-3 complete turns to lock the dome in position.
- Check whether the rooflight is completely closed (push the acrylic dome upwards with your hand to see if there is any movement).



Octagonal Shaft

## ROOFLIGHTS

### MPK Rooflight (when fitted)


**WARNING:**

Never stand on the dome of the rooflight!


**Instruction for use**

The rooflight can be opened fully, or in four different directions, so that the dome can be angled against driving weather conditions. The handle profiles of both roller blinds (flynet and roller blind) click into space at the edge of the frame and can be opened by pulling the handle (arrow on the handle profile).

With both handle profiles clipped together they can be moved to any position. To separate, fully open the flynet and squeeze together the catches on the central lock and allow flynet to recoil.

**Free-air-flow**


**WARNING:** When closed there is a free airflow through the rooflight, which must be kept free at all times.

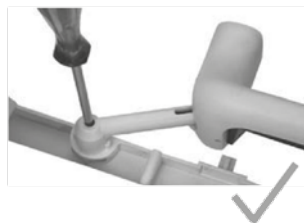
**When driving**
**IMPORTANT:**

All rooflights must be locked down before travelling and both roller blinds locked in the fully open position against the frame.

**Care instructions:**

The rooflight should only be washed by hand, using a sponge with plenty of clean water to avoid scratching. Caustic detergents and solvents may attack the plastic and make it brittle or disintegrate.

For easier cleaning of the dome it can be removed from the frame by releasing the four screws holding the handle arms. Do this from the inside of the van.



Lift the dome clear of the roof and rotate so that it can be lowered into the van across the diagonal of the aperture.

Make sure that only the original screws are used when replacing the dome and that they enter the thread in the plastic correctly. Do not over-tighten.

Never remove the screws holding the dome and the handles together. These are secured by a torque screwdriver and should only be handled by an approved dealer.

**Safety precautions:**

- repairs should be carried out only by trained personnel
- inform an approved dealer in case of defects and malfunctions
- before starting off, check the rooflight for damage in the acrylic dome (tension cracks) and the opening mechanism which could arise owing to, for example, branches and other natural causes.
- do not step on the acrylic dome
- close the rooflight before starting off (check whether it is locked)
- do not leave the vehicle with the rooflight open (danger of burglary)
- do not open in strong wind or rain
- before opening, remove snow, ice, dirt, etc. from the acrylic dome
- malfunctions are to be repaired by an approved dealer at once
- do not use caustic detergents (danger of tension cracks in the acrylic dome)
- before setting off close the acrylic dome and open the blinds
- function of the ventilation (optional) is only ensured if the space between roof and glazing dome is free of dirt and snow.

**Care instructions:**

- clean the acrylic dome with the Seitz acrylic cleaner
- opaque spots and light scratches on the acrylic dome can be removed with the Seitz Acrylic Polish and the Seitz Special Polishing cloth:
- Use talcum powder regularly (4 times yearly) to care for the rubber seals
- clean the blinds only with water and mild soap suds

The guarantee becomes null and void if the care and safety instructions are not followed.

## DOORS/TABLES

### Care of laminate tops, tables, furniture and doors

**Do not** use abrasives, chemically treated cloths or aggressive detergents as these may cause damage.

**Do not** place hot objects on laminated surfaces i.e. tops, tables. Any temperatures 70°C and over may cause permanent damage.

Clean worktop surfaces, furniture and door fascias with a soft, slightly damp cloth, dry off with a soft cloth.

### Doors

In order to provide customers with the latest designs of door furniture it is possible, due to the use of natural wood, that warping may occur. This should not detract from the correct functioning of items fitted in the caravan.

#### Information

During the normal travelling vehicle vibration and flexing may cause some of the furniture doors to become out of alignment.

For your convenience many hinges are adjustable.

### Tables

Slide the top of the chest of drawers forward to form a convenient table. Lift the rear portion to slide the top away. (Fig. A)



**⚠ WARNING:** When erecting the free standing table, be careful to avoid trapping fingers.

### Table storage

To avoid damage care must be taken when removing tables from their stored position.

Where two tables are stored together in a low level storage area care should be taken to remove the table positioned opposite the hinged edge first.

Tables stored in the table storage compartment must be securely clipped into place whilst in transit.

### Shower care points

- Care should be taken as water may become hot temporarily when switched on until it mixes and regulates.
- Small children should be supervised at all times when using the shower.
- We recommend unfastening the shower head before travelling and storing safely to prevent it becoming detached whilst towing.

### Fixing of awnings

In order to avoid puncturing the outer skin of the caravan wall, it is recommended that awning poles are fixed to your caravan using load spreading eyelet pads or rubber sucker pads.

Attaching awning brackets and associated fixings to your caravan by using mechanical methods which pierce the outer skin of the caravan wall can allow water ingress which will invalidate the product warranty.

#### Important:

Care must be taken when using an awning as poles and suckers can cause damage to exterior side panels.

Awnings should be taken down in strong winds to protect the side panels from cosmetic damage and dents from the awning poles.

**Note:** Awnings should be kept ventilated when discharging products of combustion exhaust into them.

### Awning Sizes

Due to the various awning types and sizes the awning sizes provided in the Service and Warranty Handbook are for guidance only.

Full details and sizes of awnings (A-A dimensions) for your caravan can be found in your Technical Handbook.

Specific awning sizes must be confirmed with the dealer or awning manufacturer prior to purchase.

### TV Brackets (when fitted)

In some models a bulkhead mounted bracket is supplied to mount a TV on. Whilst the bracket has a secure travel lock, it is good practise to un-clip the TV from the bracket and store securely for transit.

### Colour reference

If a customer requires touch-up paint or a respray of a caravan, the correct colour code for all white components is Fiat White 249.

Please be aware that colours can fade over time, and therefore, if the vehicle is more than a few years old, it is suggested a colour match be obtained.

### Front locker and sunroof

The front locker is made from ABS thermoformed plastics, which are easy clean textured surfaces. To ensure long life and prevent damage you must not use any cleaning materials including solvents or aggressive cleaning materials. We recommend the use of warm soapy water, applied with a damp cloth.

Where a front sunroof is fitted, directly above the front windows, it is recommended that the blind be left open during use (or storage) in high temperatures or direct sunlight, to avoid a build-up of heat within this non-opening window.

### Bonded Roof

The roof of your caravan is made from a bonded construction. Care should be taken when cleaning the roof not to walk directly on the roof. If access to the roof is required the weight of a person should be spread across a larger area using a spreader board and extreme care should be taken when working at heights.

## STEP ON HITCH/CYCLE RACK

**Step on hitch cover**

Where a step on hitch cover is fitted, customers are reminded only to stand on the designated areas, identified with black anti-slip matting. Stepping elsewhere on the hitch cover may result in damage to the hitch cover.

Models without a step on hitch cover are not suitable for standing on and failure to follow these simple instructions may result in premature failure or cracking which will not be covered by any guarantees (including extended warranties).

**Cycle racks**

The Swift Group allows the fitment of two cycle rack carrier and we have made provision for this with two pre positioned mounting rails fitted to the rear of your caravan. These are spaced at either 800mm or 850mm apart. Below are the racks which can be purchased from Thule, which are compatible with the pre-fitted rails.

The Swift Group only recommends a Thule cycle carrier which will conveniently clip in to the pre-installed mounting rail. The maximum weight which can be mounted on the carrier is 50kg.




**Caravan motor movers**

The design and fitment of a caravan motor mover shall be in accordance with the NCC Code of Practice 305 and you should ensure you receive a signed installation certificate of compliance from the installer.

**Failure to do so may invalidate your warranty**

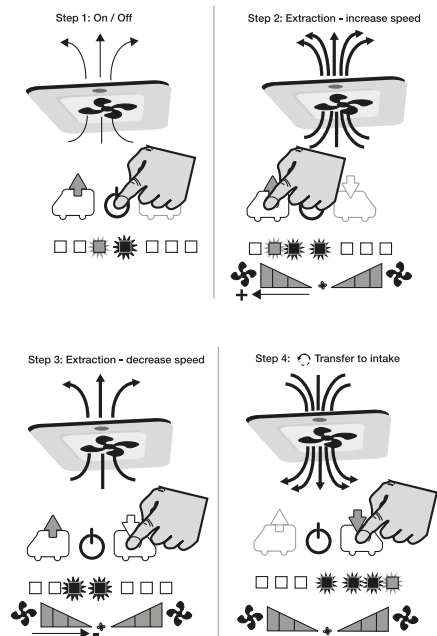
Depending on specification, the wiring in the caravan battery box may feature connections suitable for use with an aftermarket motor installation. When fitted, this will feature an isolation switch, fusing, and heavy duty wiring, terminated in two connection points within the caravan battery box.

**Thule Bike carriers**

Thule Bike carrier type	Thule Excellent standard version	Thule Elite G2 standard version	Thule Sport G2 standard version
			
Thule reference	309821	306560	307126
Capacity (# bikes)	2+1+1	2+1+1	2 + 1
Max load to be placed on the rack (kg)	50	50	50
Max individual bike weight (kg)	30	30	19
800mm Fixing rail spacing	Yes	Yes	Yes
850mm Fixing rail spacing	Yes	Yes	Yes



## Omni-vent (when fitted)

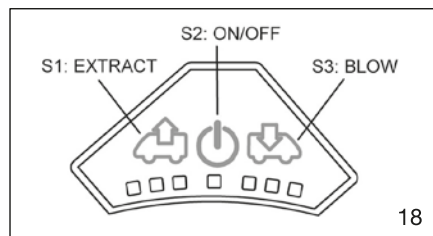


### Use rooftop

- Close the lid before driving
- To take away the roller blind, unscrew and click the frame off the side of the knob.

### Use of the ventilation

- The ventilator is started by the soft switch S2. The middle LED light lights up and the ventilator starts in comfort mode, this is the lowest speed (extract). See fig 18.



18

- By pushing on the switch S1 (extract) or S3 (intake), the airflow can be adjusted in 6 steps. See table 19.

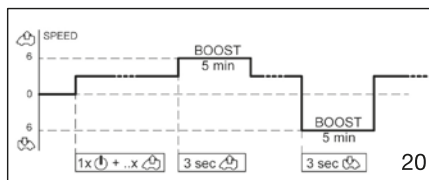
PUSH BUTTONS	LIGHTS	SPEED	Ampère	Watt
1x	■ ■ ■ ■ ■ ■	0	0,2 mA	2,4 mW
1x  + 1x	■ ■ ■ ■ ■ ■	1Ω	0,17 A	2 W
1x  + 2x	■ ■ ■ ■ ■ ■	2Ω	0,40 A	5 W
1x  + 3x	■ ■ ■ ■ ■ ■	3Ω	0,90 A	11 W
1x  + 4x	■ ■ ■ ■ ■ ■	4Ω	1,55 A	20 W
1x  + 5x	■ ■ ■ ■ ■ ■	5Ω	3,20 A	40 W
1x  + 5x  + 1x	■ ■ ■ ■ ■ ■	6Ω	7,20 A	86 W
1x  + 5x  + 2x	■ ■ ■ ■ ■ ■	4Ω		
*** *** ***				
1x	■ ■ ■ ■ ■ ■	0	0,2 mA	2,4 mW

PUSH BUTTONS	LIGHTS	SPEED	Ampère	Watt
1x	■ ■ ■ ■ ■ ■	0	0,2 mA	2,4 mW
1x  + 1x	■ ■ ■ ■ ■ ■	1Ω	0,17 A	2 W
1x  + 2x	■ ■ ■ ■ ■ ■	0	15 mA	0,2 W
1x  + 3x	■ ■ ■ ■ ■ ■	1Ω	0,17 A	2 W
1x  + 4x	■ ■ ■ ■ ■ ■	2Ω	0,40 A	5 W
1x  + 4x	■ ■ ■ ■ ■ ■	3Ω	0,90 A	11 W
*** *** ***				

\*MIN = 3,7 m³/min (2 W - 0,17 A)

\*MAX = 24 m³/min (86 W - 7,20 A)

- In order to save the battery, the speed drops from position 6 to the lowest position after one hour of use.
- It is possible to allow the ventilator to work for 5 minutes on the highest speed (boost). To do this push for 3 seconds on the button S1 (extraction) or S2 (intake). After 5 minutes the ventilator returns to its previous speed setting. See table in fig 20.



## OMNIVENT

- For reasons of security, the ventilator, the ventilator stops when the tension is too high

FLASHING LED's	PROBLEM
■ ■ ■ ✱ ■ ■ ■	or Tension < 11,1 V or Tension > 19,5V
✱ ■ ■ ■ ■ ■ ✱	Motor blocked
■ ■ ✱ ■ ✱ ■ ■	Motor not connected

### Maintenance

The ventilator grid can be removed for cleaning. Also the mosquito screen can be taken out for cleaning.

### Remark on the transport of the caravan with Omni-vent

The roof light is only waterproof in the direction of the traffic. When transporting the caravan in the opposite direction, or when the back of the caravan is up, ensure the dome is watertight by using the 'Lock-unlock' (not supplied on a ventilator version) or by using something that ensures that the dome remains closed when being transported.

## REAR VISION CAMERA

### Digital Reversing System (when fitted)

The Caravan Reversing Camera Kit features an LCD monitor for use as a reversing / rear view aid, and also includes satellite navigation software.



- 100% digital car / caravan monitor kit
- Interference-free wireless transmission
- 5" colour LCD screen
- Infra-red night vision

**Cautions:** This reversing / rear view camera system is provided as an aid only. It should not be relied upon as the sole indication of your vehicle position or the position of other vehicles or any obstacles. The supplier, manufacturer or supplying dealer accepts no responsibility for damage or injury to property or persons following the use or misuse of this equipment.

### System Operation

The monitor and camera system is provided as an aid when reversing your caravan and can also be used to provide an additional view from the rear of the caravan whilst driving.

It should not be relied upon as the sole indication of your vehicle position or the position of other vehicles or any obstacles.

When reversing or manoeuvring please ensure the area around your caravan is clear from obstructions, and do not wholly rely on the camera view, use your mirrors and seek assistance as required.

### Caravan Camera

The camera fitted to the rear of the caravan has no serviceable parts, however the following precautions should be observed.

- Check that the camera lens is clean as dirt can obscure the view.
- Never use a power washer or water jet to clean the camera or transmitter.

### Connecting the Car

Before you can use the monitor with the camera you need to connect your caravan to the car with the 13 pin towing connector.

When the car engine is started the rear camera will receive power and switch on automatically.

### Connecting the Car

Before you can use the monitor with the camera you need to connect your caravan to the car with the 13 pin towing connector.

When the car engine is started the rear camera will receive power and switch on automatically.

### Installing the Monitor in the towcar

The monitor has various features you should be familiar with for correct operation.

Firstly attach the mount to the rear of the monitor and connect the car power cable. The monitor mounting plate clips to the rear of the monitor. The windscreen mounting then clips onto the mounting plate. The power cable plugs into the mini-USB socket on the side of the monitor with the other end plugging into the car power socket.

The monitor has an internal rechargeable battery which will last for around 1 hour when used without the power cable. This battery is charged when the power cable is connected. Charging is indicated by a red LED on the side of the monitor.

Now attach the monitor mount to the windscreen using the suction mounting.

- Do not position the monitor in a place that will block the drivers' view of the road.
- Do not block air bags or other dashboard features.
- Safely position the power cable to prevent entanglement or cable damage.
- Ensure the monitor is secure. The suction mount can be moistened to enhance the seal to the windscreen.

## REAR VISION CAMERA

- Do not leave the monitor in a visible place when the vehicle is unattended.
- The monitor has no serviceable parts. Do not open the case.
- Use your own depth perception; objects may appear further away than they actually are.

### Turning the Monitor power On/Off

To turn the monitor on:

- Press and hold the power key for 3 seconds. The Android operating system will start and present you with a menu.

To turn the monitor off:

- Press and hold the power key for 3 seconds. The power off menu will appear; select the Power off option.

### Using the Monitor- Home screen Apps

The monitor uses the Android operating system which is widely used on mobile phones and tablets. Some of the basic Android functions are covered in this manual, but further information can be found in the Android quick start guide available in electronic format from this link:

[www.sargentltd.co.uk/AndroidGuide.pdf](http://www.sargentltd.co.uk/AndroidGuide.pdf)



Android Settings – use this to setup the initial WiFi connection



Android Music – use this to play any installed music



Android Calculator – select this to use the built in calculator



Reversing Camera – select this to view the reversing camera



Satellite Navigation – select this to access the satellite navigation

### Initial WIFI set-up



Note this will usually have been completed by your dealer before delivery. Turn the monitor on and wait for the unit to start up.

- On the menu screen select the Android settings icon .
- Turn the Wi-Fi setting on by sliding the on-screen switch.
- Touch the Wi-Fi setting to show a list of available networks.
- The camera system uses the WIFI\_AVIN network, so select this.
- Touch in the password area and enter the password 12345678 to connect.
- Touch done and then connect, WIFI AVIN should then state 'Connected'
- Touch the back button twice to return to the main menu.
- This is a one off operation. The unit will remember the settings for future use.

Note for security reasons the caravan transmitter only connects to one receiver (monitor, phone or tablet) at a time. Please ensure you disconnect one device before trying to connect another.

### The Reversing Camera App



Select this to launch the reversing camera App.

- To view the camera select the camera App on the menu screen.
- The software will connect to the transmitter and the camera image will be shown on screen.

The following describes the available buttons / options within the camera App

## REAR VISION CAMERA



Use this button to record the video being displayed (see note)



Not used



Use this button to take a photo of the onscreen image



Signal indicator  
white = Signal being received  
grey = no signal



Use this button to view a list of recorded video files or photos



Use this button to change the default network name and password (see note)

**Note:** The unit has a limited storage memory, so try to avoid recording long sections of video otherwise you may fill up the available storage space. The storage space can be expanded by adding a Micro SD card to the unit, inserting it in the slot provided. The unit will work with a card from 4Gb to 32Gb. Please use a good quality card, ideally class 6 or above.

**Note:** It is possible to change the default network name and password. This should not be necessary and is not recommended, but can be done if you have two systems close together and would like each to be identified differently.

Press the settings button to change the network name and password. When the information is changed the connection to the transmitter will be lost and you will need to reconnect the WiFi using the initial WiFi setup process but this time using your new network name and password.

If something goes wrong with this process the transmitter can be reset back to the factory settings. To do this access the transmitter (located above the number plate under the black panel) and with the transmitter powered up, press the reset button. The network name will be reset to WIFI\_AVIN and the password to 12345678.

### The Satellite Navigation App



Select this to access the satellite navigation App.

- The first time you start the SatNav App you will have to choose some options and default settings. Please read the guidance on screen.
  - Select language, Done
  - Select Yes/No
  - Next
  - Select voice, we recommend English UK James, next
  - Set or change the Units format (Miles or Metres etc.) next.
  - Set or change route settings, next
  - Finish
  - Speed camera warnings, Leave on, Turn Off
- The full SatNav user manual is available in electronic format from the following link:  
[www.sargentttd.co.uk/IGOGuide.pdf](http://www.sargentttd.co.uk/IGOGuide.pdf)
- The SatNav software is quite straight forward to use, but the following points will help with the initial operation.
- When entering a UK post code please remember to enter the space between the two halves of the code, i.e enter HU17 0TB not HU170TB.
- When entering a destination for the first time you may need to change the onscreen keyboard format. To explain this here is a walkthrough to enter a post code address.

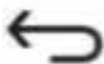
## REAR VISION CAMERA

- Select Destination, Find address
- Press on Town, then if the keyboard looks incorrect, press More, select the English keyboard (either ABC, or QWERTY format)
- Enter a test post code (HU17 0TB), pressing the 123 button to switch to number entry and please noting the space (...)
- Select the required address from the list
- If known, enter the house number (39), Done
- Press GO
- An overview of the route is shown for a short while, the unit will start navigating

### Switching between Apps



The following Android system buttons (at the bottom of the screen) can be used to switch between App's, close App's or go to the previous screen.



**BACK:** Opens the previous screen you were working in, even if it was in a different App. Once you back up to the Home screen, you can't go back any further.



**HOME:** Return to the home screen.



**RECENT APPS:** Opens the previous screen you were working in, even if it was in a different app. Once you back up to the Home screen, you can't go back any further.

### Using the separate App on your Android or Apple iOS phone

If you don't want to use the supplied monitor you can use the separate App on an Android or Apple iOS device.

Head to the appropriate App store (Android or Apple) and search for WIFI\_AVIN. Download and install the App.

Initial WiFi setup - The camera system creates its own WiFi Network for the monitor or your own phone or tablet device to connect to, so you need to setup this initial connection.

- On the device menu select the settings option to connect to a new network.
- Turn Wi-Fi on if it is not on already.
- View the list of available networks.
- The camera system uses the **WIFI\_AVIN** network, so select this.
- Enter the default password **12345678** to connect.
- Now return to the main menu and start the App.
- If the caravan is connected to the car and the engine is running, the camera image will be shown on the screen.

**Product Specification - Caravan Camera Kit**

Transmission Frequency	2400MHz – 2483.5MHz
Unobstructed Effective Range	100m (approx.)
Operating Temperature	0oC – 60oC
Storage Temperature	25oC
Frame Rate	30fps
Video Compression	H.264
Encryption:	WPA2
Operating Humidity:	20% – 80% RH
Monitor Display:	5" TFT LCD
Monitor battery Life:	1 hour (approx.)
Monitor Power Supply:	DC 5V via Car Adaptor

**Warranty and Support**

For warranty information and technical support, please contact:



Sargent Electrical Services Ltd

If your Caravan Reversing Camera Kit requires service, please discuss this with your dealer or direct with us.

Sargent Electrical Services Ltd  
Unit 39, Tokenspire Business Park  
Beverley  
East Yorkshire  
HU17 0TB

Telephone: 01482 678981  
Fax: 01482 678987

E-Mail: [support@sargentltd.co.uk](mailto:support@sargentltd.co.uk)

## SERVICE DOORS

### Seitz Service door operating instructions (when fitted)

To open the door put the key in the lock fig 1.



Turn in an anti-clockwise direction until the locking handle is released fig 2.



Remove the key and turn the handle in a clockwise direction fig 3.



open the door until the sprung stay engages fig 4 (Not fitted to the toilet door).



To close the door push the spring stay in to fold away (when fitted fig 4.) and close the door applying pressure to the hatch until you hear the locks click in to place fig 5.



Insert the key fig 6.



Turn anti-clockwise fig 7.



Then remove the key fig 8 and lock by turning the handle anti-clockwise and pushing back in to place. Note the handle will not push back in to place until all the locks are closed figure 5.

